Health in Iowa

Annual Report

From the
Behavioral Risk Factor Surveillance System

Iowa 2010

Iowa Department of Public Health

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1. INTRODUCTION

History

In 1981, the Centers for Disease Control and Prevention (CDC) began assisting states in conducting a risk factor survey to monitor behaviors associated with premature death and disability. Then, in 1984, the CDC launched the Behavioral Risk Factor Surveillance System (BRFSS) working in an ongoing fashion with several states to assess the health status and health risk behaviors of their citizens. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

Nature of the Survey

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey. It is financially and technically supported by the CDC with further financial support from public and private sources.

The BRFSS is designed to collect information on the health conditions, health-related behaviors, attitudes, and awareness of residents age 18 and over. It also monitors the prevalence of these indicators over time. The indicators surveyed are major contributors to illness, disability and premature death.

This report focuses on the data collected during calendar year 2010. Some of the health-related issues discussed are: general health status, health care access, tobacco use, alcohol consumption, body weight, physical activity, diet, diabetes, respiratory conditions, immunizations, and HIV/AIDS awareness.

Objectives

The objectives of the BRFSS are:

1. To determine the state specific prevalence of personal health behaviors related to the leading causes of premature death.

2. To develop the capacity of state health departments to conduct credible telephone surveys.

3. To advance the understanding that certain health-related behaviors are critical indicators of health.

Use of BRFSS Data

The CDC developed the BRFSS to help states assess health risks and monitor trends. Comparable surveillance methods are used in all states. This allows for comparisons among states and for the assessment of geographic patterns of risk factor prevalence.

The BRFSS information is used to design, implement, and support public health activities. These activities are designed to reduce the premature death and disability of Iowa residents. State public health departments are responsible for planning, implementing, and evaluating disease prevention programs. Many of these programs involve health risk behavior modification. Examples of health risk behavior modification programs in Iowa are the Diabetes Prevention and Control Program, nutrition and physical activity campaigns such as Iowans Fit for Life, tobacco cessation and counter-marketing campaigns, and campaigns against problem drinking.

One way to assess program effectiveness is to monitor the prevalence of risk factors in the population. Comparing different times, demographic groups, or geographic areas may be quite useful in developing, implementing and evaluating intervention programs.

2. Methodology

Questionnaire Design

The questionnaire consists of three sections: 1) the core questions required of all states participating in BRFSS; 2) a set of standardized modules developed by the CDC which states may opt to include in their survey; and 3) state-added questions which are designed and administered by individual states to address locally identified health problems. Core and optional module questions were previously tested. Changes in them were discussed and determinations were made whether to include them at the annual national BRFSS conference. A group of interested individuals from the Iowa Department of Public Health guided by the state coordinator met to discuss which optional modules and state-added questions to include in the coming year.

The BRFSS questionnaire is updated each calendar year by the CDC and by each participating state. In 2010, several optional modules were included for only a part of the year. The H1N1 epidemic prompted the inclusion of influenza like illness (ILI) modules from January through March and the H1N1 vaccination module from January through June. The high risk healthcare worker module was also asked in conjunction with the vaccination module from January through June. We resumed asking the ILI module in October through December. A module to evaluate the media campaign "The flu ends with U" to encourage influenza vaccination also began in October. Both the ILI and campaign questions ran into 2011. The questionnaire that appears in appendix 2 will not show the modules included for half of the year or less. The responses from these modules will not be discussed in this report.

Participation by Iowans in the BRFSS survey is random, anonymous, voluntary and confidential. Survey participants are requested to provide such demographic information as age, sex, race, marital and employment status, annual household income, educational level, and location of residence by county and zip code. This location information is suppressed in public use data when the numbers are so small that the respondent might be identified.

Sampling Process

Only adults age 18 years and older residing in households were interviewed. People residing in group homes or institutions were not sampled. Households were selected using list-assisted random-digit dialing. This method provides a list of randomly chosen phone numbers from the pool of all existing phone numbers. These numbers are not drawn in a simple random fashion, but use what is known as the disproportionate stratified sampling technique (DSS). This sampling methodology was designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers in an efficient fashion.

The DSS method divides phone numbers into two strata. The first stratum is residential but unlisted. The second stratum is composed of residential listed numbers. Each stratum was sampled at a different rate. The listed residential numbers were sampled at the highest rate. Some numbers were marked by the list provider as not to be called because they have been

predetermined to be nonresidential or nonworking. There was no set number to be sampled per group, and completed interviews were not thrown out.

The sample was also stratified into six geographic regions. These regions are the same regions used by health resource and emergency planning groups within the state. Geographic regions were represented at the same proportion as their population within the state. Four of these regions were further subdivided into counties having a relatively high minority population and counties having low or no minority population based on the most recent census estimates and past survey experience. The minority counties were sampled at a higher rate than the non-minority counties in an effort to better represent minority groups in the Iowa sample.

Approximately equal numbers of interviews per month were conducted from January through December in 2010 for a total sample size of 6,102. Interviews were conducted in both English and Spanish. There were 55 Spanish interviews. Interviewers made multiple attempts to reach a number to complete an interview before replacing that number.

One person residing in the home, 18 years or older, was randomly selected to answer the survey. If the person selected was not available, an appointment was made to complete the interview at another date and time. If the person was not available during the interview period, or if the person refused to participate, no other member of that household was interviewed. Attempts were made to convert initial refusals into participants.

In 2010 another stratum was added devoted to households having cell phones only. All other strata excluded cell phones. However, if they had both cell phones and landline phones, it was considered that they could be included in the landline sample, and, therefore, not interviewed on their cell phone. The cell phone only sample was a statewide sample of adults and was not further stratified geographically. These respondents were only asked the core questions in the survey along with some procedural questions. For instance, they were asked if they were doing anything that would make it unsafe to conduct the interview and not interviewed if they were. Six hundred and five interviews were conducted with this cell phone sample. The data from cell phones will not be used in the main body of this report. A special appendix will compare responses from the cell phone only sample to the landline sample. In the future the two groups will be combined in reporting.

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments made as needed to schedule or complete interviews. The average time to complete a landline interview varied greatly per month as the part-year modules were added and removed. The response rate, defined as completed interviews + partial completes divided by all eligible households called, was 41.2 percent. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. Of the 6,102 interviews conducted, 281 were partial interviews. This means that results from questions later in the questionnaire are determined from a somewhat smaller sample than earlier questions. Even when not restricted to some sub-sample such as a particular age group. See Appendix 2 for the questions and their order.

A Computer Aided Telephone Interviewing (CATI) system was used. The CATI system not only assists interviewers in presenting the questionnaire and recording the responses, it also helps keep track of appointments and callback attempts, and reports statistics of call dispositions. Data then were edited for accuracy and completeness using software provided by CDC. After editing, monthly data were submitted to the CDC and to the Iowa Department of Public Health.

Advantages and Limitations

Telephone interviews provide a means to conduct affordable surveys to monitor the prevalence of behavioral risk factors. Surveys based on telephone interviews are much faster to complete than surveys based on in-person interviews.

In one hour, an experienced telephone interviewer can handle busy numbers, calls not answered, and refusals to participate, and still successfully complete one and one-half interviews. In contrast, in one day of in-person interviewing, many miles of travel may be required with few interviews completed.

Another advantage of telephone surveys is the much higher response rate compared to self-administered surveys, such as mail surveys.

Supervision and administration are simpler for telephone interviews than for in-person interviews. All calls can be made from one central location, and supervisors can monitor interviewers for quality control.

There is one main limitation to telephone surveys. All Iowans are not reachable by traditional telephone service. Some do not live in households but are in institutions such as nursing homes or prisons. Some households do not have telephones. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to own telephones and are therefore under-sampled. Furthermore, the percentage of households with a telephone varies by region New telephone technology such as caller I.D., and call blockers that block telemarketers also pose problems for telephone surveys.

Increasingly many people, including the young, single, ethnic minorities, and renters are opting not to use traditional landline telephone service in favor of cell phones.[2,3] The BRFSS is attempting to include these people in 2010, but several complications exist in combining this data with the interviews done by landline telephone.[1] For instance, a landline telephone is seen as a household appliance, while a cell phone is more frequently seen as an individual possession.

Despite these limitations, prevalence estimates from the BRFSS correspond well with findings from surveys based on in-person interviews, including studies conducted by the National Center for Health Statistics and the American Heart Association.

Some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to under-report their weight and inaccurately recall socially undesirable habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Analysis of the data

When analyzing BRFSS data, conclusions are to be drawn about the entire adult population of the state of Iowa. However, since only a sample of randomly chosen people is asked the questions, the true prevalence in the population can only be estimated. Some of the factors involved in making such estimates must be considered. First, data were weighted to Iowa's population. Weighting took into consideration the facts that the number of adults per household and the number of phone numbers per household influence a person's likelihood of being included in the survey. Next, weights were adjusted to match Iowa's population by age, gender, and region. The state's population estimates were derived from the most currently available census data files.

The judgment of the value of prevalence in a population, such as the state based on the prevalence within a sample, always involves educated guesswork. The prevalence values from the survey and the true state prevalence values may differ by some amount, but a range of "true" state values can be determined with a high degree of confidence from the prevalence in the sample.

Most charts and tables in this report will indicate a range of values in which there is a 95% chance of the true Iowa value falling. This range is referred to as a 95% confidence interval (CI). Charts will indicate this by use of a black line at the end of the bars in the chart. The end of the bar is the sample value, while the value in the population is probably somewhere in the range represented by the line. It is usually the case that when the CIs of two or more groups do not overlap, their population values are truly different.

An important factor in determining how well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, a person would only be asked at what age they were diagnosed with diabetes if they answer "yes" to whether they have ever been told they had diabetes. These smaller numbers decrease the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In general, data in which the number of responses is less than 50 or the 95% confidence interval is larger than 20% will not be reported since this data is considered highly unreliable.

Some people refuse to answer select questions but choose to respond to the majority of the questions. Those interviews were still used in the final count for the total sample size. However, they were not counted on the specific questions they refused. Unless otherwise indicated, prevalence measures do not include those who refused to answer a question or said they did not know.

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3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 6,102 respondents in the landline portion of the BRFSS for the year 2010 included 2,332 males and 3,770 females age 18 years and older. The following tables present the distribution of this respondent sample by 1) age and gender, 2) race/ethnicity, 3) level of education, and 4) household income.

Table 3.1: Distribution of Iowa Survey Respondents by Age and Gender for Year 2010

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	70	3.0	91	2.4	161	2.6
25-34	161	6.9	288	7.6	449	7.4
35-44	320	13.7	449	11.9	769	12.6
45-54	459	19.7	699	18.5	1,158	19.0
55-64	558	23.9	760	20.2	1,318	21.6
65-74	410	17.6	693	18.4	1,103	18.1
75+	341	14.6	760	20.2	1,101	18.0
Unknown	13	0.6	30	0.8	43	0.7
Total	2,332	38.2	3,770	61.8	6,102	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2010

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,743	94.1
Black Non-Hispanic	80	1.3
Other Non-Hispanic[1]	93	1.5
Hispanic	139	2.3
Unknown/Refused	47	0.8
Total	6,102	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2010

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	403	6.6
High School Grad or GED	2,138	35.0
Some College or Technical School	1,648	27.0
College Graduate	1,899	31.1
Unknown/Refused	14	0.2
Total	6,102	100.0

[1] Other Non-Hispanic also includes those who chose multiple race categories.

Table 3.4: Distribution of Iowa Survey Respondents by Annual Household Income for Year 2010

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	477	7.8
$15,000-$24,999	841	13.8
$25,000- 34,999	643	10.5
$35,000-$49,999	892	14.6
$50,000-$74,999	963	15.8
>=$75,000	1,362	22.3
Unknown/Refused	924	15.1
Total	6,102	100.0

4. General Health Status and Health-Related Quality of Life

Background

General health status defined by responses to a single question such as "How is your health, in general?" have been found to be significant predictors of mortality. Additional studies that controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find that the risk of mortality is two to six times greater for those individuals who had reported earlier that their health was bad or poor, compared to those who had reported their health as excellent.[2] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[2]

The CDC has defined health-related quality of life (HRQOL) as "an individual's or group's perceived physical and mental health over time"[1]. Physicians have often used HRQOL to measure the effects of chronic illness in their patients to understand better how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health.[1]

Self-ratings of health, or health-related quality of life, seek to determine how people perceive their own health and how well they function physically and psychologically during their usual daily activities. These indicators are important because they can assess dysfunction and disability that are not measured by standard morbidity and mortality measures.

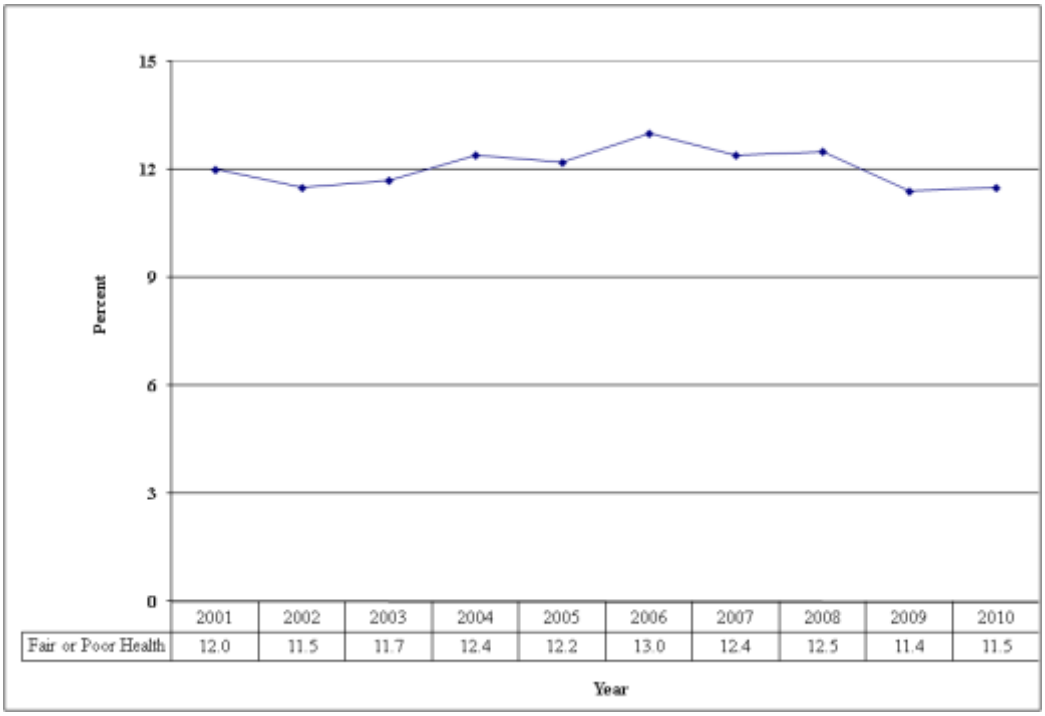
Emotional support and life satisfaction have become regularly occurring core measures in the BRFSS. While they are not technically health-related quality of life measures, they certainly reflect a person's general quality of life. They are likely to influence or be influenced by the person's general health status.

General Health Status Results

In 2010, when asked how their health was in general, 18.7 percent of respondents reported that it was excellent. Another 37.3 percent said it was very good. While 32.4 percent reported good health, 11.5 percent rated their health as fair or poor. This figure for fair or poor health is about the same as the 11.4% figure found in 2009. Figure 4.1 shows that the trend in prevalence of fair or poor health reached a peak in 2006 and has been trending downward since.

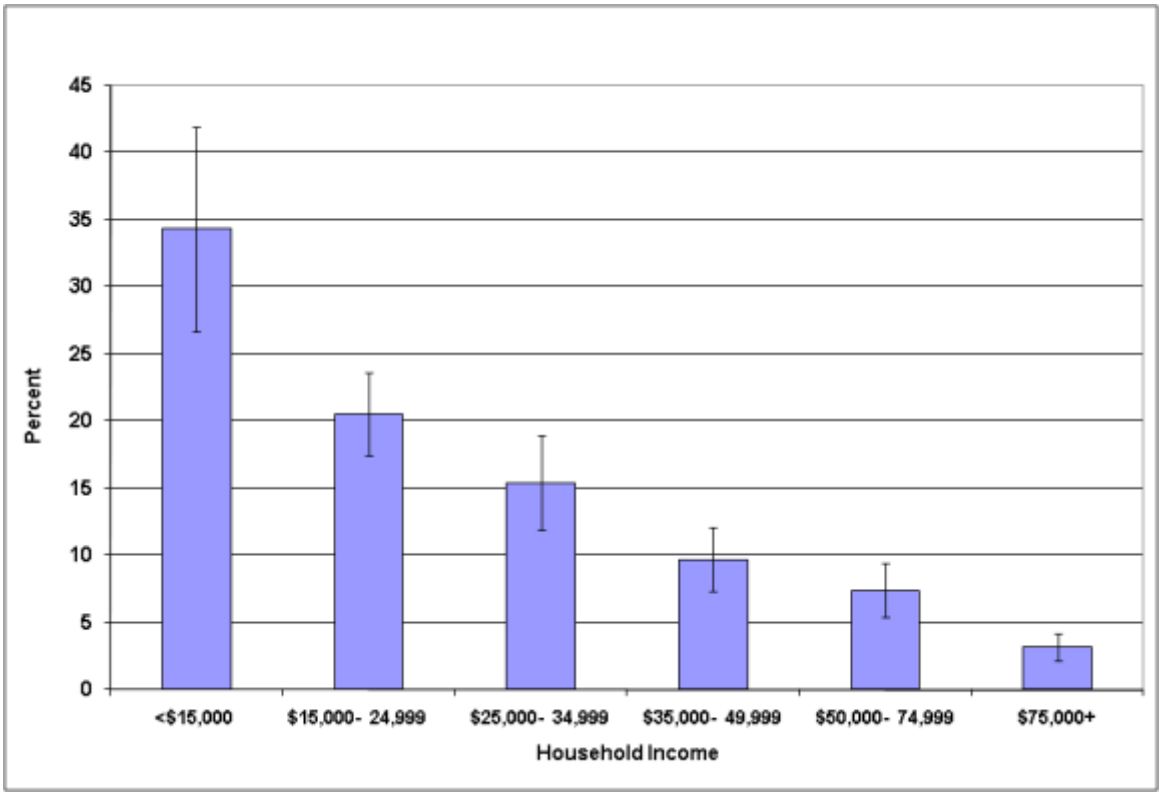
Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 3.2 percent of those with incomes of $75,000 or over reported fair or poor health, 34.3 percent of those with incomes below $15,000 did so (see figure 4.2). Other respondents who were more likely to report having fair or poor health were those with less than a high school education, racial and ethnic minorities, and those 75 years old and older. Those with a college education, those with household incomes $50,000 or higher, and those age 18 to 45

Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fair or Poor Health	12.0	11.5	11.7	12.4	12.2	13.0	12.4	12.5	11.4	11.5

Figure 4.2: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2010



years all reported less than 8% with fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 68.8 percent of respondents reported none of the days and eight percent reported 14 days or more.

As shown in Table 4.2, males had fewer days of physical health not being good than females. There were also fewer bad physical days with younger age, higher education, and higher income.

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2010

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	11.5	(10.5-12.5)
SEX		
Male	10.6	(9.2-12)
Female	12.4	(11-13.8)
RACE/ETHNICITY		
White/Non-Hisp.	11.1	(10.1-12.1)
Non-White or Hisp.	16.8	(10.3-23.3)
AGE		
18-24	3.7	(0-7.6)
25-34	4.9	(2.5-7.3)
35-44	7.6	(5.4-9.8)
45-54	12.6	(10.4-14.8)
55-64	14.9	(12.7-17.1)
65-74	16.0	(13.6-18.3)
75+	26.8	(23.9-29.8)
EDUCATION		
Less Than H.S.	24.4	(19.3-29.5)
H.S. or G.E.D.	16.1	(13.9-18.3)
Some Post-H.S.	9.4	(7.8-11)
College Graduate	5.8	(4.4-7.2)
HOUSEHOLD INCOME		
<$15,000	34.3	(26.7-41.9)
$15,000- 24,999	20.5	(17.4-23.6)
$25,000- 34,999	15.4	(11.9-18.9)
$35,000- 49,999	9.7	(7.3-12.1)
$50,000- 74,999	7.4	(5.4-9.4)
$75,000+	3.2	(2.2-4.2)

Once again, household income had the greatest impact. People with household incomes less than $15,000 reported 23.1 percent having fourteen or more bad physical health days, while people with household incomes of $75,000 or more had only three percent.

When responding to the question of how many days during the past 30 days their mental health was not good, 72.2 percent of the respondents indicated none of the days and 7.1 percent reported 14 or more days. Table 4.2 shows the pattern for bad mental health days. Fourteen or more days in the past 30 of bad mental health is referred to as frequent mental distress (FMD).

Fewer men, older people, those with high education, and those with high income had a lower prevalence of FMD. Once again annual household income made the most difference. An annual household income of $15,000 or less had the most (13.4%), while only 3.4 percent of those with $75,000 or more had FMD.

When asked how many days poor physical or mental health kept them from performing their usual activities, 61percent of those with some days of either bad physical or mental health said none. On the other hand, 10.8 percent said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2010

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	8.0	(7.2-8.8)	7.1	(6.3-8)
SEX				
Male	7.0	(5.8-8.1)	6.3	(4.8-7.7)
Female	9.0	(7.9-10)	8.0	(6.9-9.1)
RACE/ETHNICITY				
White/Non-Hisp.	8.1	(7.3-9)	7.1	(6.2-8)
Non-White or Hisp.	6.3	(3.8-8.9)	7.3	(4.4-10.2)
AGE GROUP				
18-24	1.7	(0-4)	5.2	(1.3-9)
25-34	3.0	(1.1-4.9)	8.2	(5.3-11.1)
35-44	6.0	(4.2-7.7)	8.7	(6.6-10.7)
45-54	8.5	(6.6-10.3)	7.9	(6.3-9.5)
55-64	11.3	(9.4-13.2)	9.0	(7.3-10.8)
65-74	13.2	(11-15.5)	3.6	(2.5-4.7)
75+	16.9	(14.5-19.3)	4.3	(3.1-5.5)
EDUCATION				
Less than H.S.	14.8	(9.9-19.8)	8.0	(4.6-11.3)
H.S. or G.E.D.	10.5	(9.1-12)	8.9	(6.9-10.8)
Some Post-H.S.	6.9	(5.6-8.2)	8.4	(6.7-10.1)
College Graduate	5.0	(3.8-6.2)	4.1	(3.2-5.1)
HOUSEHOLD INCOME				
Less than $15,000	23.1	(17-29.2)	13.4	(9.5-17.2)
$15,000- 24,999	12.8	(10.3-15.3)	11.2	(8.2-14.1)
$25,000- 34,999	9.7	(7.2-12.2)	9.0	(5.8-12.3)
$35,000- 49,999	7.5	(5.5-9.4)	7.8	(5.6-10.1)
$50,000- 74,999	6.1	(4.5-7.7)	6.3	(4.3-8.3)
$75,000+	3.0	(2.1-3.9)	3.4	(2.3-4.5)

When asked how often they got the social and emotional support they needed 52 percent of Iowans responded always and another 33.8 percent responded usually. Never was reported by 3.3 percent.

Groups with higher prevalences reporting no emotional support were men, racial minorities, people age 65 and older, people with less education, and people with lower household incomes.

When asked in general how satisfied they were with their lives, 96.4 percent of Iowans reported either very satisfied or satisfied. Satisfaction was less likely for lower education and lower income individuals. In no case was combined very satisfied and satisfied responses given by less than 90 percent of a particular group. The least satisfaction was reported by Iowans with incomes less than $15,000 per year. In this group only 27 percent were very satisfied, and 63.4 percent were satisfied. Combined this was 90.4 percent.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.7 percent to 32.1 percent. The worst case seemed to be an outlier, since the second worst rate was only 23.7 percent. The median value was 15 percent. Iowa ranked quite well with only 11.5 percent rating their health as fair or poor. Only four states had a lower percent of residents reporting fair or poor health.

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5. INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

Access to health care is important for the prevention of disease, the detection of illness through screening, treatment, and management of illness and injuries. Adults who have a usual source of care are much more likely to use the health care system and obtain needed services.[1]

For those who lack health insurance, it may be impossible to obtain adequate health care. This not only includes expensive surgery and hospital stays, but also preventive care, management of chronic disorders such as diabetes or hypertension, and emergency treatment. Such a lack of access to health care allows small easily treatable problems to become major health problems for many individuals.[2]

Accurate estimates of the uninsured are difficult to obtain. Much of this difficulty is due to the characteristics of the population lacking insurance. Examples include working in small companies that do not provide insurance as an employee benefit, being unemployed, or lacking a permanent residence.

Health care costs are escalating at an ever-increasing rate. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and/or those living on fixed incomes.

Insurance Coverage and Access to Health Care Results

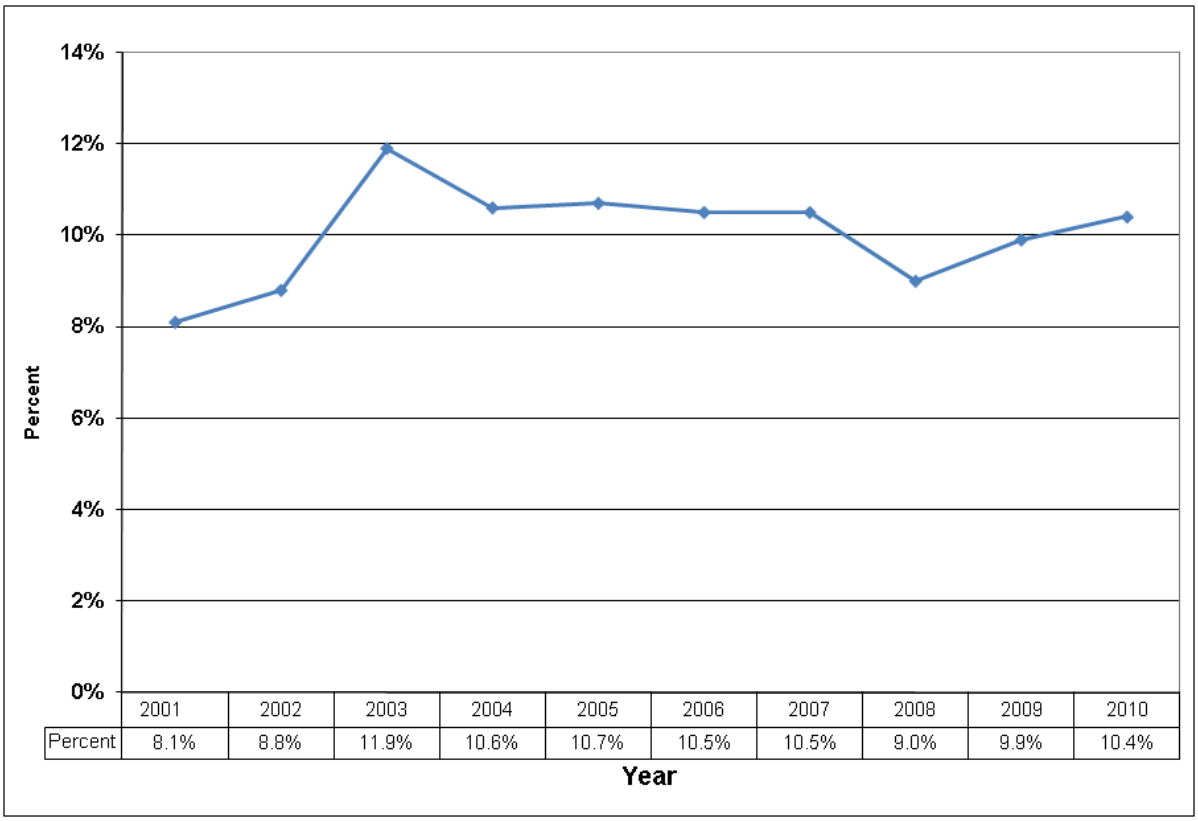
In 2010, 10.4 percent of the survey respondents reported they had no health insurance. This is an increase from the 9.9 percent found in 2009 continuing an upward trend (see figure 5.1).

Table 5.1 shows that more males lacked health insurance than females. Furthermore, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health care coverage. Both respondents with less than a high school education and respondents with an annual household income of less than $15,000 had the highest percentage of individuals without health care coverage (28.1%). Almost everyone age 65 years and older had health care coverage due to Medicare. An equally low percentage was found among those with an annual household income of $75,000 or more (1.4%).

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Unemployed respondents had 21.9 percent reporting they were not covered by health insurance. Only 1.6 percent of retirees were without health insurance.

People who were married were much more likely to have health care coverage than those who were not. Only 6.2 percent of married respondents were without coverage, while 19.1 percent of unmarried respondents were without it.

Figure 5.1: No Health Insurance Coverage Trend Iowa 2001 – 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Percent	8.1%	8.8%	11.9%	10.6%	10.7%	10.5%	10.5%	9.0%	9.9%	10.4%

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 7.7 percent said that there was. The percentage was higher for females, younger people, people with less education, people with lower incomes, and racial and ethnic minorities. The lowest percentage (2.9%) was for people age 65 years and older. This was followed closely by people with annual household income of $75,000 or more. The highest percentage (20.3%) was for people who were non-white or Hispanic.

Since it is important that care be coordinated, respondents were asked if they had one person they thought of as their personal doctor or health care provider. A positive reply was given by 79.2 percent of respondents. Women, White non-Hispanics, older people, people with more education, and people with higher household incomes were more likely to report a regular provider. Non-White or Hispanic respondents were least likely to report one regular provider (62.6%), while those age 65 years old and older were most likely (88.2%).

When asked how long it had been since their last regular check up, 72.5 percent said less than one year. On the other end, one percent said they had never had a checkup. People who were female or older were more likely to have a checkup in the past year. Respondents who were 65 years old or older were most likely to have a checkup (87.3%), while those from age 25 to 34 were least likely (59.6%).

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2010

DEMOGRAPHIC GROUPS	No Health Insurance Coverage		Time Couldn't Afford Help		Have One Person As Health Provider		Had Checkup In Past Year	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	10.4	(9-11.8)	7.7	(6.7-8.7)	79.2	(77.6-80.8)	72.5	(70.7-74.3)
SEX								
Male	11.4	(9.2-13.6)	6.5	(4.9-8.1)	73.9	(71.4-76.4)	65.1	(62.4-67.8)
Female	9.5	(7.9-11.1)	8.9	(7.5-10.3)	84.3	(82.5-86.1)	79.6	(77.6-81.6)
RACE/ETHNICITY								
Non-Hispanic White	9.2	(7.9-10.5)	6.8	(5.8-7.7)	80.5	(78.8-82.1)	72.5	(70.8-74.2)
Non-White or Hisp.	26.5	(19-34.1)	20.3	(12.7-28)	62.6	(54.4-70.8)	72.6	(63.8-81.3)
AGE								
18-24	24.0	(16-32)	9.6	(3.7-15.5)	68.7	(60.1-77.3)	69.1	(60.5-77.7)
25-34	12.7	(9.4-16)	8.7	(5.8-11.6)	71.2	(66.5-75.9)	59.6	(54.5-64.7)
35-44	10.4	(7.9-12.9)	9.7	(7.5-11.9)	79.1	(75.8-82.4)	67.4	(63.7-71.1)
45-54	9.6	(7.6-11.6)	10.3	(8.3-12.3)	80.2	(77.7-82.7)	71.3	(68.4-74.2)
55-64	9.9	(7.9-11.9)	6.4	(4.8-8)	83.6	(81.2-86)	77.5	(75-80)
65+	1.5	(0.9-2.1)	2.9	(2.1-3.7)	88.2	(86.6-89.8)	87.3	(85.7-88.9)
EDUCATION								
Less than H.S.	28.1	(20.1-36.1)	10.6	(6.9-14.3)	63.4	(55.4-71.4)	73.6	(65.8-81.4)
H.S. or G.E.D.	12.3	(9.9-14.7)	8.4	(6.4-10.4)	78.5	(75.8-81.2)	73.1	(70-76.2)
Some Post-H.S.	12.0	(9.3-14.7)	10.0	(7.6-12.4)	79.9	(76.8-83)	71.6	(68.3-74.9)
College Graduate	3.3	(2.3-4.3)	4.4	(3.2-5.6)	82.7	(80.3-85.1)	72.5	(69.8-75.2)
HOUSEHOLD INCOME								
Less than $15,000	28.1	(20.3-35.9)	14.1	(10-18.2)	69.7	(61.9-77.5)	65.3	(57.1-73.5)
$15,000- 24,999	19.3	(15.4-23.2)	17.5	(13.8-21.2)	73.4	(68.5-78.3)	74.0	(69.7-78.3)
$25,000- 34,999	14.8	(10.7-18.9)	10.4	(7.5-13.3)	75.8	(70.3-81.3)	70.7	(65-76.4)
$35,000- 49,999	9.0	(6.1-11.9)	7.4	(4.9-9.9)	81.3	(77.8-84.8)	73.7	(69.6-77.8)
$50,000- 74,999	3.2	(1.8-4.6)	4.3	(2.5-6.1)	78.9	(75-82.8)	73.1	(69.2-77)
$75,000+	1.4	(0.6-2.2)	3.5	(1.7-5.3)	86.0	(83.8-88.2)	73.4	(70.5-76.3)

Comparison with Other States

In the fifty-four states and territories, the percent of non-elderly people without health insurance ranged from five percent to 34.1 percent. The highest percent was from an American territory, while the lowest was from Massachusetts, which was the first state to pass major health reform legislation. Eight states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 12.6 percent of its non-elderly respondents reporting not having any insurance. The median for states and territories was 17.8 percent. The figures for both Iowa and the nation are all higher than those obtained in previous years. However, Iowa is still doing quite well compared to the nation as a whole.

Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* and 2020 goals for health insurance coverage are to see all people be covered by some form of health insurance. In Iowa, only 87.4 percent of the non-elderly have coverage. This is far short of the goal and headed in the wrong direction.

Having one specific source of primary care also missed the mark. Iowa had 79.2 percent reporting a single source, while the goal was 96 percent for *Healthy People 2010*. *Healthy People 2020* has separate goals for people age 18 to 64 and people 65 and over. The goal for age 18 to 64 is 89.2 percent, while the goal for age 65 and over is 100 percent. The results for Iowa were 77 percent and 88.2 percent respectively.

References

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6. CARDIOVASCULAR DISEASES

Background

"Cardiovascular diseases" (CVD) refer in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means coronary heart disease, heart failure, and stroke, taken together, which are the circulatory system disorders of greatest public health concern in the United States today. "Heart disease" most often includes coronary heart disease, heart attack (myocardial infarction), or heart failure. "Stroke" refers to a sudden impairment of brain function, sometimes termed "brain attack", which results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of clogged arteries (atherosclerosis) and high blood pressure (hypertension).

Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death in the United States, accounting for nearly a third of all annual deaths.[3]

Deaths are only part of the picture. More than 80 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly 1 million Americans. Each year, fifteen to 30 per cent of stroke survivors are permanently disabled.[2] More than seven million hospitalizations each year are because of cardiovascular diseases.[3]

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be $503 billion in 2010, including health care expenditures and lost productivity from death and disability.[1]

In Iowa, heart disease is the number one cause and stroke is the fourth leading cause of death. Even so, deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 302.2 in 1999 to 229.8 in 2009. The rate of deaths from stroke has gone from 80.2 in 1999 to 54.1 in 2009.[2] These decreases are mostly a result of medicines, surgical procedures and improved systems of care after an acute event.

At the same time mortality has declined, the BRFSS is documenting noteworthy increases in many risk factors that lead to heart disease and stroke. Reducing cardiovascular disease risk requires an integrated strategy that includes:

1) Lifestyle behavior change -- weight management; increased physical activity; no tobacco use; a low-fat, low-cholesterol diet with moderate sodium, sugar and alcohol intake; and control of high blood cholesterol, elevated blood pressure, and diabetes.

2) Community environmental support such as population screening to identify individuals with high levels of blood cholesterol, blood pressure, blood glucose, and other individuals at risk for heart disease. Community support also includes interventions that teach the skills necessary for behavior change that make living a healthier life easier. One popular example is the establishment and upkeep of bicycle trails for use by the public.

3) Development of public policies that encourage healthy lifestyle behaviors. These may be implemented in the form of laws, regulations, standards, or guidelines that contribute to setting these and other social and environmental conditions. For example, dietary patterns result from the influences of food production policies, marketing practices, product availability, cost, convenience, knowledge, choices that affect health, and preferences that are often based on early-life habits.[1]

Cardiovascular Diseases Results

In 2010, 3.9 percent of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction; four percent had been told they had coronary heart disease or angina, and 2.4 percent had been told they had a stroke. Although these percents may seem small, they represent around 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke. About 7.7 percent of Iowans reported being told they had any of the three conditions.

Table 6.1 shows the distribution of these conditions by demographic groups. To get at all heart disease conditions, myocardial infarction and coronary heart disease/angina are combined when looking at the influence of various demographic factors.

More cardiovascular conditions were experienced by men, older people, white non-Hispanics, people with lower education and people with lower household incomes. Age is the variable with the most impact on having had these conditions. Less than one percent of those under age 45 reported a heart condition, while 23.8 percent of those 75 years or older reported a heart condition and 29.7% reported any of the three cardiovascular conditions. The sex difference, though not significant, was reversed for having had a stroke.

These results represent those who have survived these cardiovascular events. That may not match the actual prevalence of these conditions. Events ending in death on their first occurrence could not be considered here. Mortality data is required to complement the information from this survey.

References

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2. Iowa Department of Public Health. *2009 Vital Statistics of Iowa*. 2010. http://www.idph.state.ia.us/apl/common/pdf/health_statistics/2009/vital_stats_2009.pdf.
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Table 6.1: Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2010

DEMOGRAPHIC GROUPS	Had any Heart Disease (MI or CHD)		Had Stroke		Had Any Cardio-vascular Disease	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.0	(5.4-6.6)	2.8	(2.2-3.4)	7.7	(7-8.5)
SEX						
Male	7.6	(6.6-8.7)	2.4	(1.8-3)	8.8	(7.7-9.9)
Female	4.4	(3.8-5)	3.2	(2.2-4.2)	6.7	(5.7-7.7)
RACE/ETHNICITY						
White/Non-Hisp.	6.1	(5.5-6.8)	2.9	(2.4-3.5)	8.0	(7.2-8.8)
Black/Non-Hisp.	6.9	(0.5-13.3)	1.2	(0-3)	6.9	(0.5-13.3)
Other/Non-Hisp.	3.6	(0.7-6.4)	0.9	(0-2.1)	4.0	(1-7.1)
Hispanic	1.1	(0-2.2)	0.3	(0-0.6)	1.3	(0.2-2.5)
AGE						
18-34	0.6	(0-1.3)	1.0	(0-2.4)	1.3	(0-2.8)
35-44	0.7	(0-1.4)	0.4	(0-0.8)	0.9	(0.2-1.7)
45-54	4.0	(2.8-5.3)	1.5	(0.8-2.2)	5.4	(3.9-6.8)
55-64	8.1	(6.4-9.8)	2.9	(1.9-3.9)	10.0	(8.1-11.8)
65-74	13.0	(10.7-15.3)	6.1	(4.5-7.7)	16.7	(14.2-19.2)
75+	23.8	(21-26.7)	10.9	(8.9-12.9)	29.7	(26.7-32.7)
EDUCATION						
Less Than H.S.	8.9	(6.4-11.5)	4.0	(2.2-5.8)	11.4	(8.5-14.4)
H.S. or G.E.D.	8.1	(6.8-9.3)	3.9	(3.1-4.7)	10.4	(9-11.8)
Some Post-H.S.	5.3	(4.2-6.4)	3.2	(1.6-4.8)	7.5	(5.7-9.3)
College Graduate	3.7	(2.9-4.5)	1.2	(0.8-1.6)	4.4	(3.5-5.3)
HOUSEHOLD INCOME						
Less than $15,000	9.3	(6.7-11.9)	6.5	(6.5-8.9)	13.7	(10.3-17.1)
$15,000- 24,999	10.9	(8.7-13.1)	5.4	(5.4-7)	14.2	(11.7-16.7)
$25,000- 34,999	9.2	(6.8-11.7)	2.7	(2.7-3.9)	10.8	(8.2-13.3)
$35,000- 49,999	6.9	(5.2-8.6)	1.6	(1.6-2.2)	7.8	(6.1-9.6)
$50,000- 74,999	3.7	(2.6-4.9)	1.5	(1.5-2.3)	4.6	(3.3-5.9)
$75,000+	2.9	(1.9-3.9)	2.0	(2-3.8)	4.2	(2.4-6)

7. EXERCISE AND PHYSICAL ACTIVITY

Background

A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions.[1,2,4] Despite its risks, a large proportion of people remain inactive.

Although the percentage of people who do not engage in regular physical activity remains high, many efforts are underway to try to increase the physical activity level of Iowans. Iowans Fit for Life, a program of the Iowa Department of Public Health, is actively working to increase the physical activity levels of Iowans. Interventions to increase physical activity include:

1) Creating a culture where physical activity is the easy choice.
2) Creating the commitment of Iowans to walk and bike for transportation.
3) Creating policies that enable Iowans to be physically active
4) Increasing the number of complete streets. (A complete street is a street that has been designed with all users in mind cars, cyclists and pedestrians.)
5) Developing recreational trails.
6) Enhancing worksite wellness programs.
7) Continuous promotion of physical activity and the built environment by the Iowa Department of Public Health and other organizations.

Encouraging people to have a less sedentary lifestyle by engaging in regular physical activity continues to be a significant step toward a healthier Iowa.

Exercise and Physical Activity Results

In 2010, 75.2 percent of respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. This is a bit lower than the 75.8 percent found in 2009 (see figure 7.1), but almost the same as found in 2008.

A larger proportion of younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This percentage was higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those with less than a $15,000 annual household income (57.3%), while the highest was for those with a college education (86%). This was closely followed by those having an annual household income of $75,000 or more (85.5%) (see table 7.1).

Much of the reason for lack of physical activity is that people today spend a great deal of time in front of a computer or television screen. Two questions were asked to assess this amount of time. One asked about screen time during the week, while the other asked about screen time on the week end.

It was found that on the week end 43.8 percent spent five hours or more in front of a TV or computer screen. During the week, only 10.1 percent spend five hours or more. Most spend between one to three hours (52.4%) in this activity.

Table 7.1: Physical Activity in Iowans, 2010

Demographic Groups	Any Leisure Physical Exercise in Last Month	
	%	C.I. (95%)
TOTAL	75.2	(73.6-76.8)
SEX		
Male	75.5	(73.1-77.9)
Female	75.0	(73.2-76.8)
RACE/ETHNICITY		
White/Non-Hisp.	75.6	(74-77.2)
Non-White or Hisp.	71.0	(63.7-78.4)
AGE		
18-24	83.7	(77-90.4)
25-34	78.8	(74.5-83.1)
35-44	78.1	(74.8-81.4)
45-54	75.8	(73.1-78.5)
55-64	73.7	(71-76.4)
65-74	68.9	(65.8-72)
75+	61.7	(58.5-64.9)
EDUCATION		
Less than H.S.	58.1	(51-65.2)
H.S. or G.E.D.	68.0	(65.3-70.7)
Some Post-H.S.	75.7	(72.6-78.8)
College Graduate	86.0	(84-88)
HOUSEHOLD INCOME		
Less than $15,000	57.3	(49.1-65.5)
$15,000- 24,999	65.5	(61-70)
$25,000- 34,999	73.7	(69.2-78.2)
$35,000- 49,999	72.2	(68.3-76.1)
$50,000- 74,999	79.8	(76.7-82.9)
$75,000+	85.5	(83.1-87.9)

Comparison with Other States

Values for the measure of not engaging in leisure time physical activity ranged from a low of 17.5 percent to a high of 33 percent. This excludes one territory with such a greatly higher value that it can be considered unusually extreme. Iowa ranked a little above the median on not engaging in leisure time physical activity. Iowa was at 24.8 percent, reporting not engaging in any leisure activity while the median for the nation was at 24percent.

Health Objectives for the Nation

The national target for reducing the proportion of adults who engage in no leisure-time physical activity is 20 percent[3] for *Healthy People 2010* and 32.6 percent for *Healthy People 2020*. Iowa's level of 24.8 percent does not meet the 2010 target but surpasses the more modest 2020 target.

References

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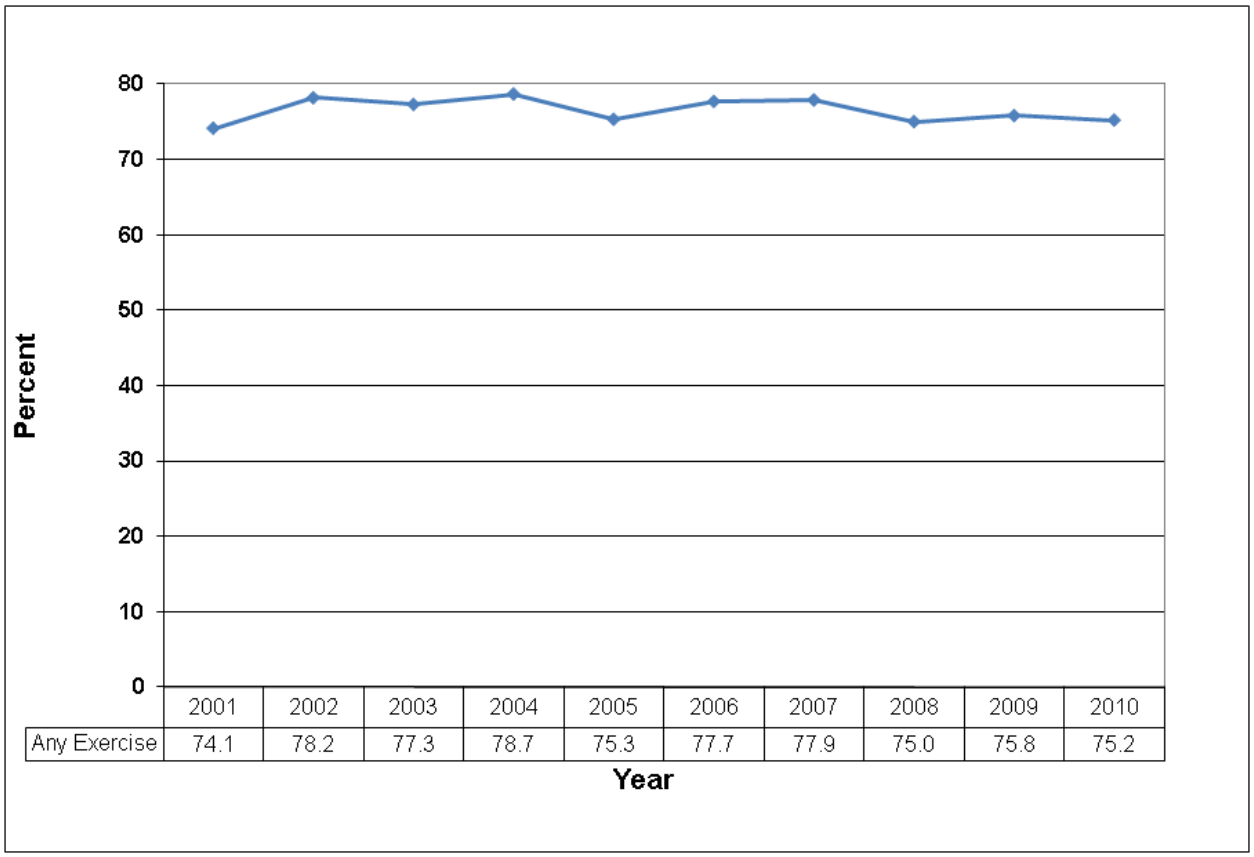
Figure 7.1: Trend in Physical Activity in Iowa by Year



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8. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for heart disease, cancer, and stroke, which are the first, second and third leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.[5] Obesity has been increasing so rapidly that it may be regarded as an epidemic.

The obesity epidemic is a big contributor to the skyrocketing health care costs in the United States. As the Baby Boomer generation ages, obesity-related costs to Medicare are likely to grow significantly because of the large number of people in this population and its high rate of obesity.[4] The medical care costs of obesity in the United States are staggering. In 2008 dollars, these costs totaled about $147 billion.[1] There are other costs as well that are harder to pin down. For instance, obese people miss more work. Because people are fatter, airlines spend more on jet fuel, and the obese themselves spend more on gas.[2]

The origin of overweight involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. The increase in the prevalence of being overweight is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[3]

Strategies to Combat Obesity would seek to advance policies that:

1) Increase the availability of affordable healthy foods in all communities;
2) Increase the frequency, intensity, and duration of physical activity;
3) Improve access to safe and healthy places to live, work, learn, and play;
4) Limit screen time; and
5) Encourage employers to provide workplace wellness programs.[4]

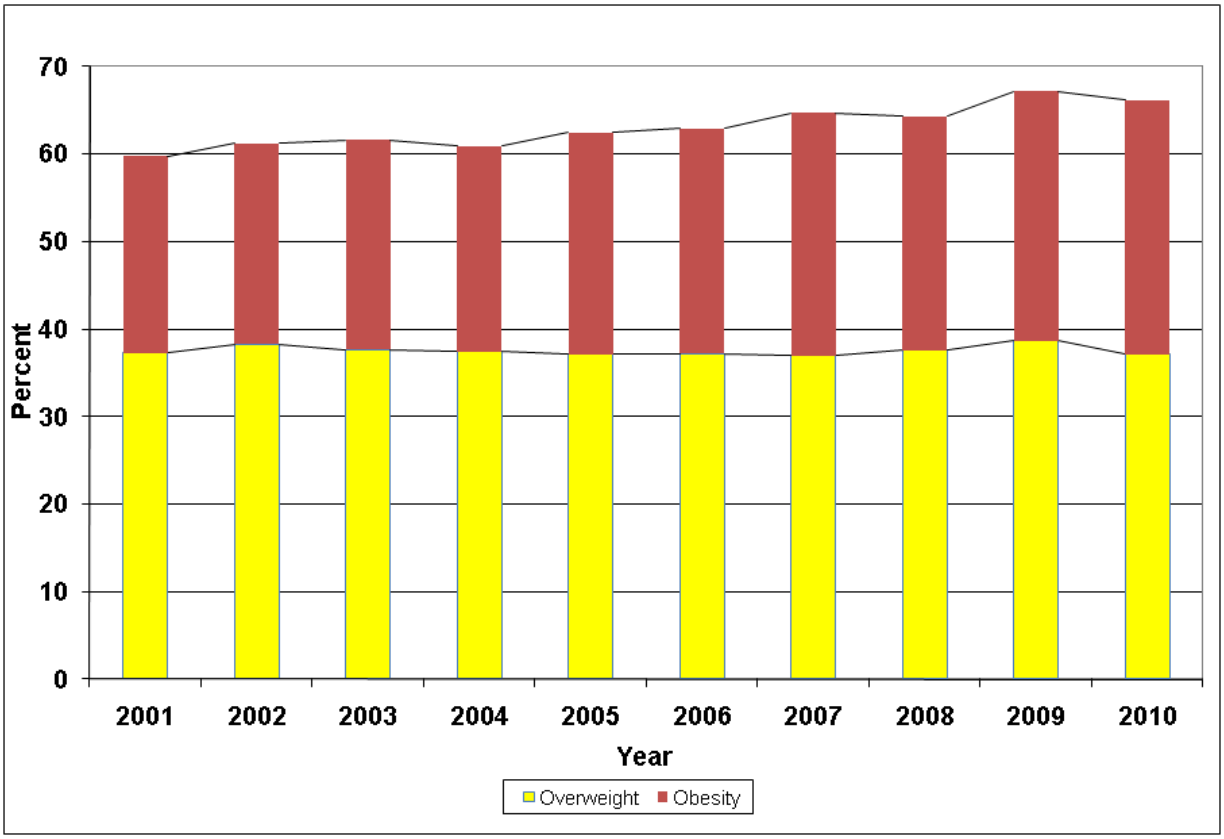
Exact measurements of body fat require sophisticated equipment. To eliminate this problem obesity is often estimated from weight standards that are adjusted for body frame. Carefully measured weight and height remain the most easily performed and useful means to determine nutritional status and to predict mortality for the general population.[3]

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI determined from self-reported weight and height. In adults, overweight is considered to be a BMI value greater than or equal to 25 and less than 30. Obesity is considered to be a BMI greater than or equal to 30. This self report method is likely to result in an underestimation of the actual extent of obesity. However, comparisons among demographic groups, years, and geographic regions (states) are likely to be valid. Furthermore, this is the only measure of overweight and obesity available on the state level.

Overweight & Obesity Results

The BRFSS data show that in 2010 37.1 percent of Iowans are overweight and 29.1 percent are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 66.2 percent. The percent overweight and combined are both lower than in 2009, but obesity by itself continues to increase. This marks the highest level of obesity yet seen in this survey (see figure 8.1).

Figure 8.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 2001 - 2010



Demographic factors behave somewhat differently for overweight and obesity. The self-reported weights show many more males than females are overweight and obese. Overweight and obesity increase with age until late middle age after which a decline is seen. Reduced obesity is mainly responsible for this decline. Males are not more obese than females at the extreme age groups. In fact, there is a reversal of the difference between the sexes in the 18 to 24 year old age group. Obesity shows a very sharp decrease for both sexes in the 75 year old and over age groups (see figure 8.2). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women and there is no decline at the oldest age group.

The effects of income are different for overweight and obesity. The percentage overweight tends to increase a little with increasing income. On the other hand, obesity tends to decrease with

Table 8.1: Overweight and Obese Iowans Based on BMI, 2010

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	37.1	(35.3-38.9)	29.1	(27.5-31.7)	66.2	(64.4-68)
SEX						
Male	43.6	(40.9-46.3)	30.6	(28.1-33.1)	74.3	(71.6-77)
Female	30.5	(28.5-32.5)	27.6	(25.4-29.8)	58.0	(55.6-60.4)
RACE/ETHNICITY						
White/non-Hisp.	36.7	(34.9-38.5)	29.2	(27.4-31)	65.9	(64.1-67.7)
Non-White or Hisp.	43.2	(34.6-51.7)	26.7	(18.6-34.7)	69.8	(62.2-77.5)
AGE GROUP						
18 - 24	27.0	(19-35)	20.0	(12.2-27.8)	47.0	(37.7-56.2)
25 - 34	37.6	(32.5-42.7)	27.9	(23-32.8)	65.5	(60.6-70.5)
35 - 44	39.1	(35.2-43)	30.9	(27.2-34.6)	69.9	(66.4-73.5)
45 - 54	37.4	(34.1-40.7)	32.7	(29.6-35.8)	70.1	(67.1-73.1)
55 - 64	39.3	(36.2-42.4)	34.0	(31.1-36.9)	73.3	(70.6-76)
65-74	37.7	(34.4-40.9)	34.7	(31.4-37.9)	72.3	(69.3-75.3)
75+	41.5	(38.2-44.8)	20.2	(17.4-22.9)	61.7	(58.4-64.9)
EDUCATION						
Less than H.S.	35.2	(28.1-42.3)	27.5	19.3-28.6	62.7	(54.7-70.7)
H.S. or G.E.D.	37.5	(34.4-40.6)	32.6	24.2-28.9	70.1	(67.2-73)
Some Post-H.S.	36.2	(32.7-39.7)	30.3	21.8-26.9	66.5	(62.8-70.2)
College Graduate	38.1	(35.4-40.8)	25.0	16.6-21.4	63.0	(60.3-65.7)
HOUSEHOLD INCOME						
Less than $15,000	28.1	(21.4-34.8)	38.9	23.5-33.0	67.0	(58.2-75.8)
$15,000- 24,999	35.9	(31-40.8)	31.0	21.6-28.9	66.8	(61.9-71.7)
$25,000- 34,999	35.7	(30.2-41.2)	32.1	21.5-28.7	67.8	(62.1-73.5)
$35,000- 49,999	36.8	(32.7-40.9)	31.0	22.8-29.3	67.8	(63.5-72.1)
$50,000- 74,999	40.9	(36.8-45)	28.6	21.0-27.8	69.5	(65.6-73.4)
$75,000+	39.8	(36.5-43.1)	26.6	16.2-22.0	66.4	(63.3-69.5)

higher income levels. These effects somewhat cancel each other when overweight and obesity are combined (see table 8.1 and figure 8.3).

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is males with 74.3 percent. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (47%).

Comparison with Other States

Iowa's figure of 29.1 percent obese in 2010 was well above the median of 27.6 percent. The range of prevalence among the states and territories for obesity was from a low of 21.4 percent to a high of 34.5 percent. The prevalence of being obese increased from 2009 in the nation and in Iowa.

Figure 8.2: Obesity by Age and Sex, 2010

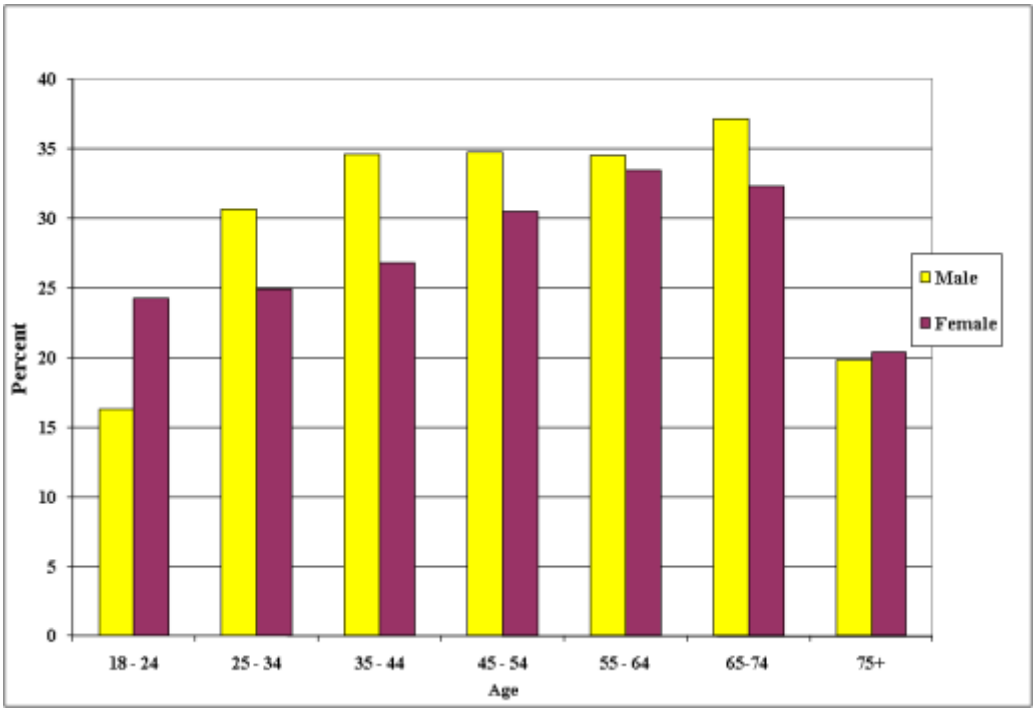
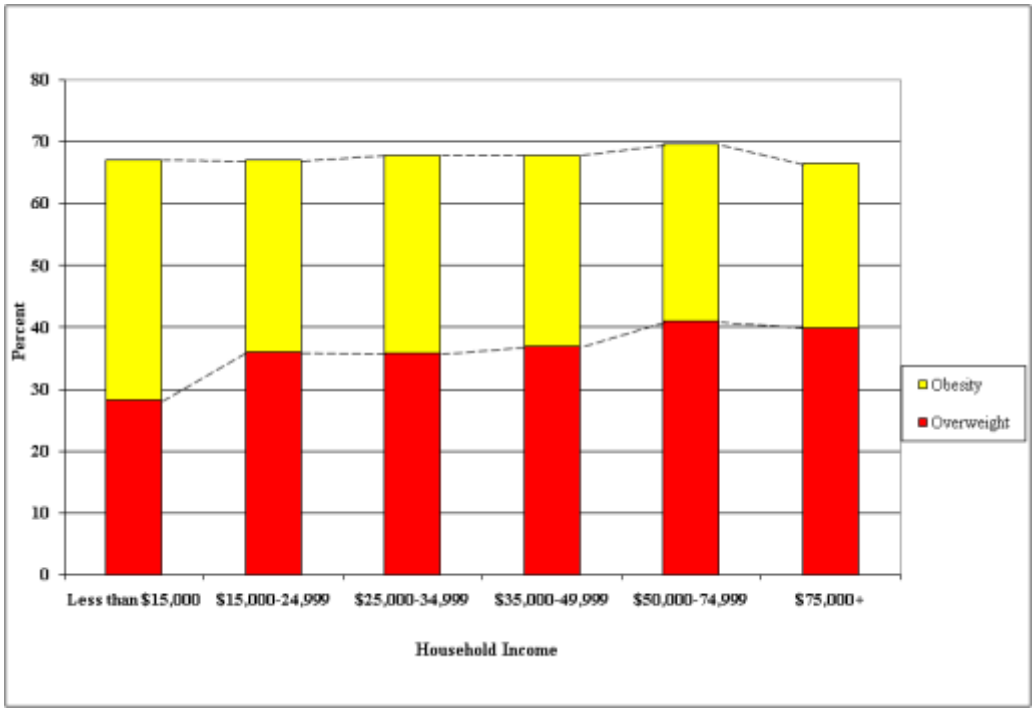


Figure 8.3: Overweight and Obesity by Income, Iowa 2010



Health Objectives for Iowa and the Nation

The health objectives on weight for the nation to be achieved by the year 2010 called for increasing the prevalence of healthy weight (neither overweight nor obese) to 60% among adults age 20 years and older. In Iowa, more than 60% of the population is above healthy weight. The *Healthy People 2020* goal is a more modest 33.9 percent. Iowa does not quite make this target having 32.8 percent at healthy weight. The *Healthy People 2010* target for obesity is 15%, while for *Healthy People 2020* it is a more modest 30.6 percent. Iowa has a prevalence of 29.7 percent for those over age 20. This is actually under the HP 2020 target. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. This goal has not been accomplished.

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9. DIABETES

Background

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can be associated with serious complications and premature death.

Diabetes rates in the United States are approaching epidemic proportions. The percentage of adults with diabetes (including both diagnosed and undiagnosed) incr**eased** from 1988–1994 (8%) to 2003–2006 (10%). Diabetes may affect persons of all ages, although prevalence increases with age. It is estimated that almost 200,000 persons 20 years of age and older have been diagnosed with Type 1 or Type 2 diabetes. In 2003–2006, 2.5% of persons 20–39 years of age had diagnosed or undiagnosed diabetes, compared with 22.9% of adults 60 years and over.[3] In 1988–1994, 10% of adults 45 years of age and over had been diagnosed by their physician with diabetes. By 2003–2006, this had grown to 13%.

Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) in 2007 of $174 billion. This includes direct medical costs of 116 billion and indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality of another $58 billion. People with diagnosed diabetes, on average, have medical expenditures that are approximately 2.3 times higher than the expenditures would be in the absence of diabetes. Approximately $1 in $10 health care dollars is attributed to diabetes.[2]

The good news is that research studies have found that positive lifestyle changes can prevent or delay the onset of Type 2 diabetes among high–risk adults. Lifestyle interventions included diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 ½ hours each week).

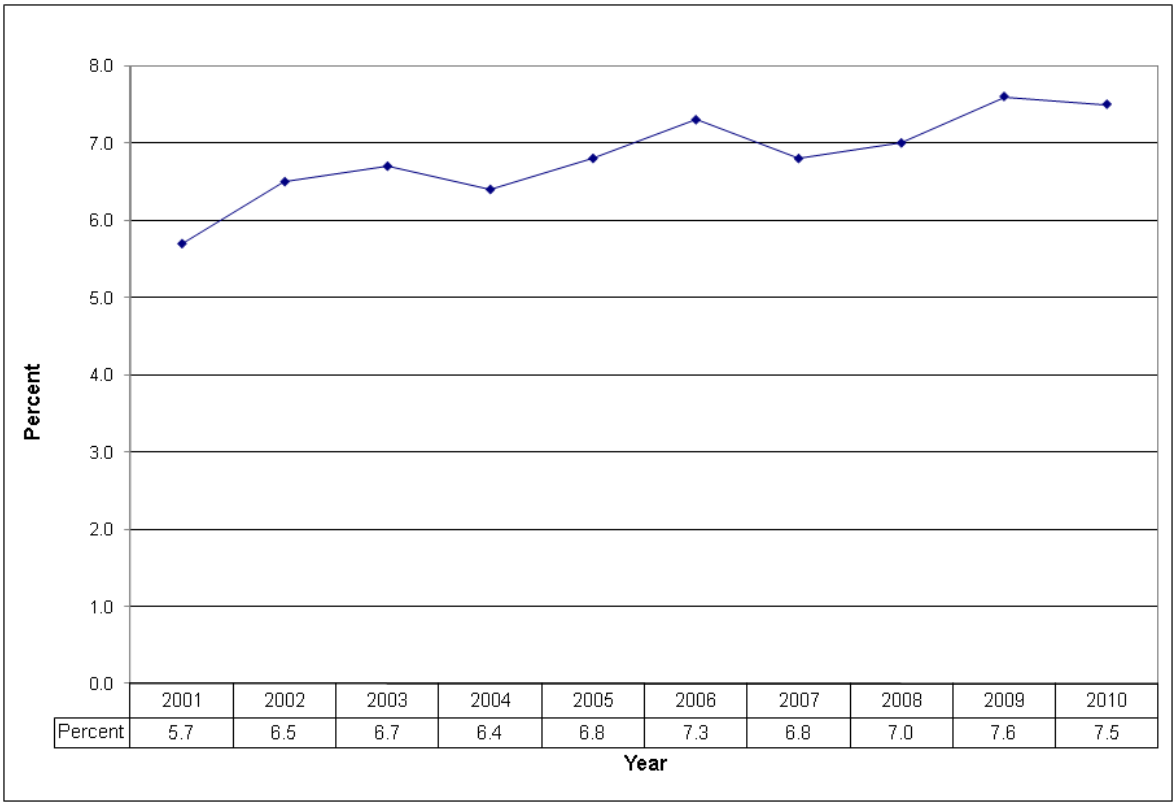
The complications of diabetes are many and severe. They can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic coma, and lower resistance to other diseases. However, complications can be minimized when diabetes is diagnosed early and the patient is taught to self manage their disease through blood glucose control, weight control, taking medications appropriately, decreasing unhealthy lifestyles such as smoking, and implementing healthy lifestyle interventions.[1]

The Diabetes Prevention and Control Program at the Iowa Department of Public Health acts as a resource for health care professionals regarding the latest guidelines for diabetes care, coordinates a statewide diabetes network, and collaborates with local community projects to develop initiatives on public awareness, prevention, and other areas of disease management. It also certifies programs for Medicaid reimbursement and assists certified programs in maintaining quality standards for outpatient education.

Diabetes Results

In 2010, 7.5 percent of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is no different from the 7.8 percent found in 2009 (see figure 9.1).

Figure 9.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Percent	5.7	6.5	6.7	6.4	6.8	7.3	6.8	7.0	7.6	7.5

Table 9.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. The demographic group with the highest percentage of diagnosed diabetics is people age 75 years and older (16.3%), while the group with the lowest percentage is people age 18 to 24 years (0.1%).

When asked if they had a test for diabetes in the past three years, 53.9 percent said they had.

More attention has been given lately to pre or borderline diabetes. It is thought that people who catch their diabetes before it is fully developed stand a good chance of avoiding it altogether by making lifestyle changes. In 2010, 5.7 percent of non-diabetic respondents were told they had pre-diabetes.

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (42%). The age group in which the least reported being first diagnosed was less than age 16 years (1.7%).

Table 9.1: Iowans Ever Told They Had Diabetes, 2010

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	7.5	(6.7-8.3)
SEX		
Male	7.7	(6.5-8.9)
Female	7.4	(6.4-8.4)
RACE/ETHNICITY		
White/Non-Hisp.	7.6	(6.8-8.3)
Non-White or Hisp.	7.4	(4.5-10.3)
AGE GROUP		
18-24	0.1	(0-0.3)
25-34	1.9	(0.1-3.7)
35-44	3.2	(1.8-4.6)
45-54	7.6	(5.8-9.4)
55-64	13.4	(11.2-15.6)
65-74	15.8	(13.4-18.2)
75+	16.3	(13.9-18.7)
EDUCATION		
Less than H.S.	8.8	(6.1-11.5)
H.S. or G.E.D.	9.5	(8.1-10.9)
Some Post-H.S.	6.8	(5.6-8)
College Graduate	6.0	(4.6-7.4)
HOUSEHOLDINCOME		
Less than $15,000	15.1	(10.4-19.8)
$15,000- 24,999	12.0	(9.3-14.7)
$25,000- 34,999	11.8	(8.9-14.7)
$35,000- 49,999	6.7	(5.1-8.3)
$50,000- 74,999	5.8	(4.2-7.4)
$75,000+	3.7	(2.7-4.7)

Of those ever told by a physician that they have diabetes, 30.3 percent reported currently taking insulin.

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four (27.2%), while 11.6 percent said never.

Respondents told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 64.5 percent checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 8.1 percent reported never testing their blood sugar. Around 90.8 percent had it checked at least once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 5.9 percent reported not having had the A1C test. Another 3.3 percent reported they had never heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

Individuals with diabetes should check their feet daily for sores and irritations and should have them checked at least once a year by their health care provider. When asked how often they check their feet, 70.2 percent of respondents who were ever diagnosed with Diabetes claimed to have checked them at least daily. Another 9.5 percent said they never checked them. Around 80 percent of respondents with feet reported they had their feet checked by a health professional at least once within the past 12 months.

Because persons with diabetes are at high risk of eye complications leading to blindness, regular eye examinations, including pupil dilation, are important. Respondents who reported ever having diabetes were asked when they had their last eye exam where their pupils were dilated. About 76.7 percent reported within the last year, while 2.4 percent reported never having such an examination. Among Iowans with diabetes, 18 percent had been told it had affected their eyes.

Learning how to manage diabetes is very important to those who have the condition to keep it from leading to deteriorating health. Only 61.8 percent of those with diabetes in 2010 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diagnosed diabetes for the states and territories was 8.7 percent in 2010. Prevalence ranged from 5.3 percent to 13.2 percent. The figure for Iowa was below the median at 7.5%. While the nation saw a small increase in the rate of diabetes this year, Iowa did not see an increase at all.

Health Objectives for Iowa

The *Healthy Iowans 2010* objective set for prevalence of diabetes was for an increase of no more than 0.2 percent per year. This would make the desired prevalence in 2010 no higher than 7.7 percent. Iowa is currently at 7.5 percent which is very slightly below the maximum goal.

Healthy People 2020 and *Healthy Iowans 2010* had objectives for the management of diabetes. In *Healthy People 2020* of all people with diabetes 58.7 percent should receive annual dilated eye exams. For *Healthy Iowans 2010* the goal was 80 percent. The figure obtained was 76.7 percent. This is much better than the *Healthy People 2020* goal, but just misses the *Healthy Iowans 2010* goal. It is disappointing that, although the *Healthy Iowans 2010* eye exam goal was met last year, the percentage fell short this year.

According to *Healthy Iowans 2010*, of all people with diabetes 75% should receive at least an annual foot exam from a health professional. The figure obtained was 80 percent meeting the goal.

Ninety-five percent of all people with diabetes should receive a glycosylated hemoglobin test at least annually according to *Healthy Iowans 2010*. The actual figure was 90.8 percent. The test should be taken at least twice a year by 71.1 percent of diabetics according to *Healthy People 2020*. The actual figure was 77.4 percent. This meets the *Healthy People 2020* goal, but not the Healthy Iowan 2010 goal.

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10. RESPIRATORY DISEASES

Background

Few things are as immediately important to life as the ability to breathe. Several respiratory diseases exist that can make breathing difficult. A few common ones are asthma and chronic obstructive pulmonary disease (COPD).

Asthma is a chronic, inflammatory disease of the lungs in which the airways become blocked or narrowed causing breathing difficulty. It is characterized by recurrent wheezing, breathlessness, coughing, and chest tightness.[3]

This chronic disease affects nearly 24 million Americans of all ages.[2] Asthma is the most common chronic disease of childhood. About seven million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980.[2] More than 200,000 Iowans now have asthma of which 148,000 are adults.[1]

The causes of asthma are not completely understood, but are most likely a combination of personal and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, acute respiratory infections, exposure to indoor air pollution (tobacco smoke, animal dander, dust mites, cockroaches, occupational exposures to more than 250 substances), outdoor air pollution (burning leaves, pollen, air pollutants), obesity, and lack of exercise. Diet and early exposure to certain infectious agents may provide some protection. After developing asthma, a person often becomes especially sensitive to any exposures to the environmental risk factors listed.[3]

Asthma is a leading cause of inpatient admission and of unscheduled emergency department and physician office visits. Many of these admissions and visits could be avoided if medical and self-management of asthma were carried out according to national guidelines. Self management of asthma involves the use of drugs and the avoidance of known triggers.

The direct and indirect costs of asthma, including inpatient and outpatient care and medications, and socio-economic costs are estimated to exceed $11 billion each year.[1] Based on national data, half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.[3]

COPD includes both chronic bronchitis and emphysema**.** It is one of the most common lung diseases. Chronic bronchitis is defined by a long-term cough with mucus, while emphysema is defined by destruction of the lungs over time. Most people with COPD have a combination of both conditions.[4]

Smoking is the leading cause of COPD. The more a person smokes, the more likely that person will develop COPD. Another cause is exposure to secondhand smoke or air pollution.

There is no cure for COPD. However, there are many things you can do to relieve symptoms and keep the disease from getting worse. Persons with COPD must stop smoking. This is the best

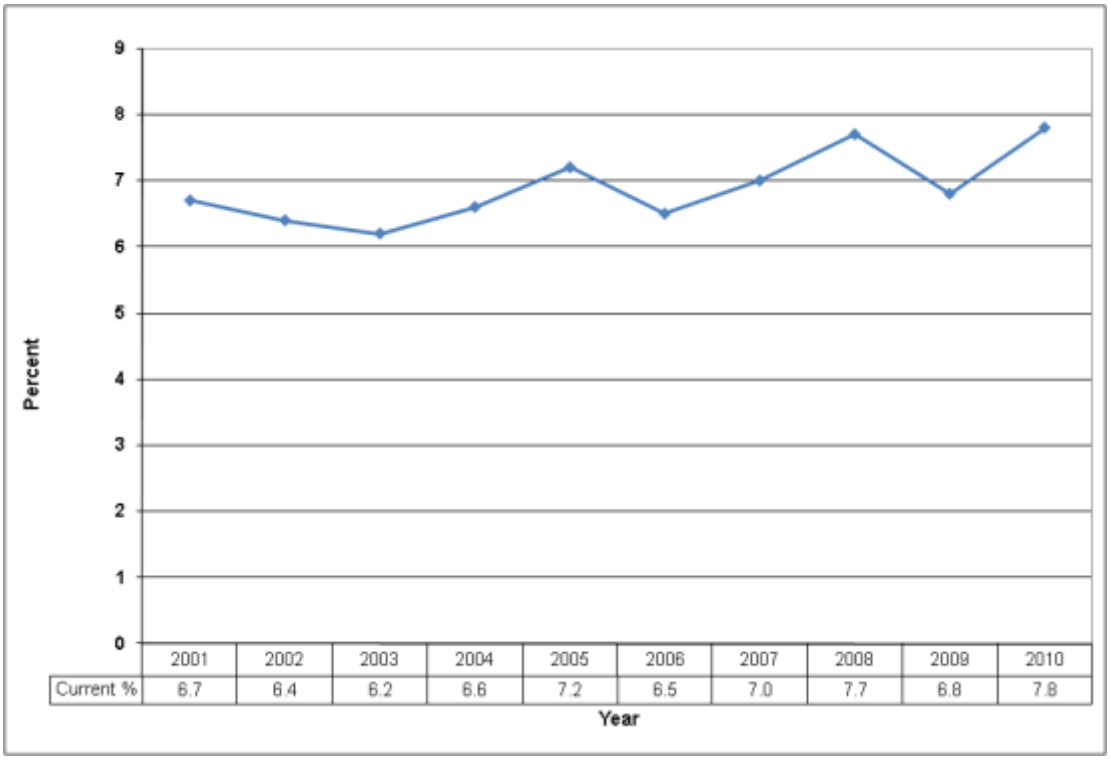
way to slow down the lung damage. Medications may also be used to treat COPD symptoms. Oxygen therapy at home may be needed if a person has a low level of oxygen in their blood.

Respiratory Diseases Results

In 2010, 11.6 percent of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 7.8 percent currently had asthma, and 3.5 percent formerly had asthma.* The percentage of Iowa adults with either lifetime or current asthma is up from 2009. In that year the percent of current asthma was 6.8 percent (see figure 10.1). Although very close to the 2008 figure, the 2010 figure for current asthma is the highest ever reported in this survey.

In Iowa, more women currently have asthma than do men. Racial and ethnic minorities as a group had a slightly lower rate of current asthma. African Americans actually had a much higher rate of current asthma, but their numbers were not reliable enough to display separately. Household income seemed to be the most powerful factor determining asthma prevalence. The group with the highest percentage currently having asthma was found among people with annual household incomes less than $15,000 (15.6%). The lowest percentage of current asthma was seen in the group earning $35,000 to $49,999 per year (4.7%) (see table 10.1).

Figure 10.1: Current Asthma in Iowa by Year, 2001 - 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Current %	6.7	6.4	6.2	6.6	7.2	6.5	7.0	7.7	6.8	7.8

Even though an adult is interviewed in the BRFSS survey, two questions about asthma are asked for a randomly determined child in the household. Reports indicated that 8.8 percent of the children had ever been told they had asthma and that 6.2 percent of all children still have asthma. This is a major increase from the figures for 2009 when 6.7 percent had ever been told they had

* For some who had ever had asthma, their current status could not be determined.

asthma and 4.7 percent still had it. The figures are closer to those from 2008. It appears that 2009 child asthma prevalence was abnormally low. Contrary to the situation for adults, a larger percent of boys were reported to currently have asthma than girls (6.6 vs. 5.7 percent).

Starting in 2006 the BRFSS has collected a considerable amount of information from the people who reported they or their children had ever had asthma in a special callback survey. Most of the data from that survey is not included in this report, but will be presented separately. From the 2009 callback survey, however, it was found that adults with asthma having asthma-related emergency or urgent care visits was far better than the *Healthy Iowans 2010* goal. While the goal was to have 12.6 percent of people with asthma have urgent or emergency care visits, Iowa only had 4.2 percent needing such visits.

Table 10.1: Iowans Currently and Formerly Having Asthma, 2010

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.8	(6.8-8.8)	3.5	(2.7-4.3)
SEX				
Male	6.6	(5-8.2)	4.4	(3-5.8)
Female	9.0	(7.8-10.2)	2.6	(1.8-3.4)
RACE/ETHNICITY				
Non-Hispanic White	7.8	(6.9-8.8)	3.6	(2.8-4.3)
Non-White or Hispanic	7.5	(4-11)	2.5	(0-5.4)
AGE				
18-24	7.9	(3.1-12.7)	6.8	(2.7-10.8)
25-34	8.1	(5.5-10.7)	5.3	(2.9-7.7)
35-44	8.2	(6.1-10.4)	2.7	(1.5-3)
45-54	6.4	(4.4-8.4)	3.3	(2.1-3.9)
55-64	7.9	(6.2-9.6)	2.5	(1.5-3.6)
65-74	8.0	(6.3-9.7)	3.5	(2.4-4.7)
75+	7.6	(5.8-9.4)	1.4	(0.7-2.2)
EDUCATION				
Less than H.S.	5.9	(3.5-8.3)	1.5	(0.1-2.9)
H.S. or G.E.D.	7.4	(5.6-9.2)	2.9	(1.7-4.1)
Some Post-H.S.	9.9	(7.7-12.1)	4.4	(2.8-6)
College Graduate	6.8	(5.4-8.2)	3.7	(2.3-5.1)
HOUSEHOLD INCOME				
Less than $15,000	15.6	(10.3-20.9)	4.9	(2.4-7.4)
$15,000- 24,999	9.4	(6.9-11.9)	2.5	(0.3-4.7)
$25,000- 34,999	9.5	(6.4-12.6)	3.4	(1.8-5)
$35,000- 49,999	4.7	(3.3-6.1)	2.6	(1-4.2)
$50,000- 74,999	6.0	(4.2-7.8)	3.6	(2.2-5)
$75,000+	7.8	(6-9.6)	3.5	(2.7-4.3)

Two other respiratory questions were asked in the Iowa BRFSS survey. When asked if they had been told they had emphysema or COPD, 3.5 percent said they had. When asked if they had ever been told they had chronic bronchitis, the prevalence was 4.6 percent. Since these two are

often considered to be different forms of COPD, 6.4 percent were found to have either one or the other.

Table 10.2 shows that having these respiratory problems was more prevalent with increasing age, decreasing education, and especially decreasing income. The highest prevalence of having either emphysema or chronic bronchitis was found among those with annual household incomes less than $15,000 (16%). The conditions were least prevalent in those respondents age 25 to 34 years (2.4%). However, a nearly identical prevalence existed in college graduates and those with annual household incomes greater than or equal to $75,000 (see table 10.2).

Table 10.2
Iowans who have been told they have COPD – Either Emphysema or Chronic Bronchitis

DEMOGRAPHIC GROUPS	COPD	
	%	C.I. (95%)
TOTAL	6.4	(5.3-7.5)
SEX		
Male	6.2	(4.4-7.9)
Female	6.6	(5.3-7.9)
RACE/ETHNICITY		
Non-Hispanic White	6.3	(5.2-7.4)
Non-White or Hispanic	6.7	(1.5-11.8)
AGE		
18-24	3.4	(0-8.5)
25-34	2.4	(0.2-4.6)
35-44	5.9	(3.1-8.6)
45-54	5.3	(3.3-7.4)
55-64	9.6	(7.1-12.2)
65-74	9.7	(6.8-12.6)
75+	10.1	(7.3-12.9)
EDUCATION		
Less than H.S.	8.5	(4.3-12.7)
H.S. or G.E.D.	9.3	(6.9-11.7)
Some Post-H.S.	6.8	(4.9-8.8)
College Graduate	2.6	(1.6-3.6)
HOUSEHOLD INCOME		
Less than $15,000	16.0	(10.3-21.7)
$15,000- 24,999	11.5	(7.7-15.3)
$25,000- 34,999	8.8	(4-13.5)
$35,000- 49,999	7.0	(4.3-9.7)
$50,000- 74,999	3.2	(1.6-4.8)
$75,000+	2.5	(1.1-3.8)

Comparison with Other States

While Iowa reported 7.8 percent of the entire adult population currently suffering from asthma, the median for the nation was 9.1 percent. Prevalence ranged from a low of 5.2 percent to a high of 11.2 percent. The two lowest ranked regions were all territories, rather than states. Iowa's burden of asthma appears to have increased relative to the nation since last year. However, Iowa's prevalence is still better than the median.

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11. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of premature death in the United States. An estimated 46 million American adults currently smoke cigarettes and cigarette smoking causes more than 443,000 deaths each year, or one in every five deaths.[1] For every person who dies from tobacco use, another 20 suffer with at least one serious tobacco-related illness. Cigarette smoking costs the nation more than $96 billion per year in direct medical expenses as well as more than $97 billion annually in lost productivity.[1] Secondhand smoke costs more than $10 billion (i.e., health care expenditures, morbidity, and mortality).[1]

Tobacco use is known to cause heart disease, peripheral vascular disease, and chronic lung disease, as well as cancers of the lung, larynx, esophagus, pharynx, mouth, bladder, pancreas, kidney, and cervix. In fact, smoking causes diseases in nearly every organ of the body.[2]

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).[2]

Secondhand Smoke (SHS) increases the risk of heart disease and lung cancer in adults. SHS also affects children by increasing lower respiratory tract infections and asthma and by decreasing pulmonary function. According to the surgeon general there is no safe level of exposure to secondhand smoke.[3]

Public health efforts to reduce the prevalence of tobacco use began after the health risks were announced in the first surgeon general's report on tobacco in 1964.

Many steps are being taken to prevent use of tobacco. Some of these include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction (cessation), and working toward changing social norms and environments that support tobacco use. The last component involves counter-advertising and promotion, product regulation, and economic incentives against tobacco.[4]

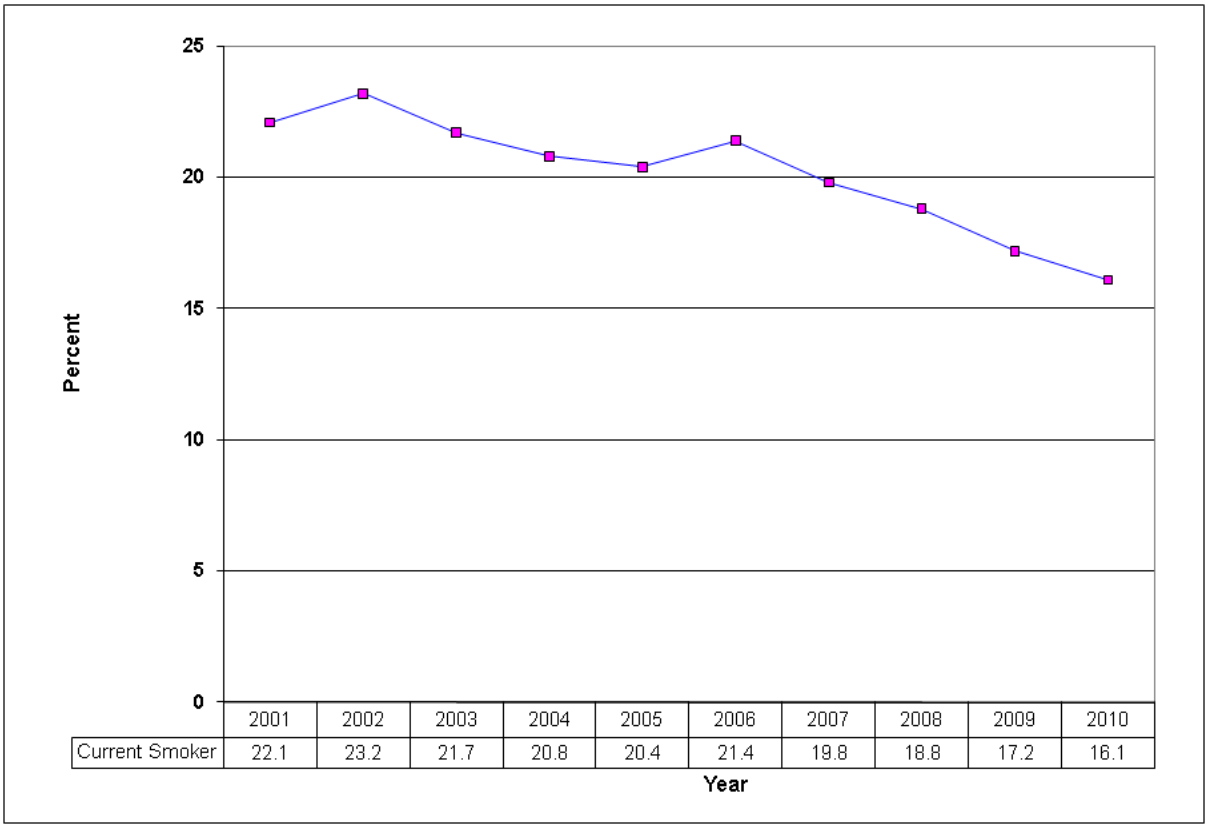
The legal environment has recently made it much more difficult to continue smoking. In March of 2007, the Iowa state legislature passed a one dollar increase in the tax on a pack of cigarettes. In the long run this should further reduce the number of smokers by inducing people to try to quit and by making it less likely that new people will start. On July 1 of 2008 a smoking ban in most public places in the state took effect. This not only made it more difficult for smokers to find a place to smoke, but was quite beneficial at reducing exposure to secondhand smoke. Nationally, in 2009 the Food and Drug Administration (FDA) was given authority to regulate tobacco products.

Tobacco Use Results

Current smoking was defined as smoking at least 100 cigarettes in a lifetime and smoking everyday or some days during the past 30 days. Of all respondents surveyed in 2010, 16.1

percent reported being a current smoker. This was a decrease from the 17.2 percent found in 2009 and is the lowest prevalence ever reported in this survey (see Figure 11.1). This continues a rapid decline in the current smoking rate since 2006.

Figure 11.1: Trend in Percentage of Current Smokers in Iowa, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Current Smoker	22.1	23.2	21.7	20.8	20.4	21.4	19.8	18.8	17.2	16.1

The proportion of current smokers was higher for males than for females. Smoking generally declined with increasing age, education, and income. People of minority race/ethnicity had a higher proportion of smokers. Respondents with household incomes less than $15,000 reported the highest proportion of current smokers (32.9%). Only 3.6 percent of respondents age 75 years and older were current smokers (see table 11.1).

Nearly 23.4 percent of respondents were former smokers. This means that they had smoked at least 100 cigarettes in their lifetime, but did not smoke now. While more males were former smokers than females, the age trend for former smokers was the opposite of that for current smokers. The 18 to 24 age group had only 4.7 percent former smokers, while the 65 to 74 year age group had 40.8 percent (see figure 11.2). White non-Hispanics had a higher prevalence of former smokers than minority racial or ethnic groups. When former smokers were asked how long it had been since they last smoked cigarettes regularly, the majority (60.6%) said ten or more years.

When asked about attempts to quit smoking, 52.6 percent of Iowa's current smokers reported they quit smoking for a day or more during the past year. Women were more likely to try to quit

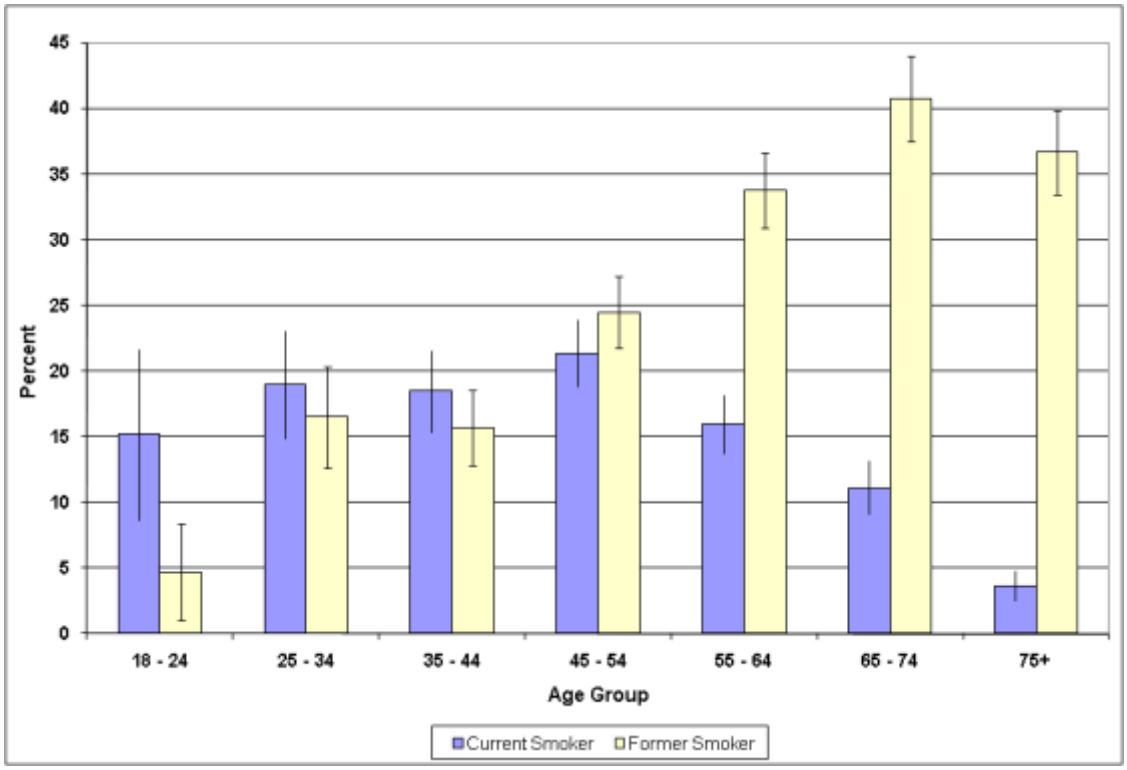
than men. Little could be said about other demographic groups since the small number of smokers in these groups led to a lack of confidence in the interpretation of the resulting figures. As the number of current smokers declines, this situation will become even worse.

Table 11.1: Percentage of Current and Former Smokers in Iowa, 2010

DEMOGRAPHIC GROUPS	Current Smoker		Former Smoker	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	16.1	(14.7-17.5)	23.4	(22-24.8)
SEX				
Male	17.5	(15.3-19.7)	28.1	(25.7-30.5)
Female	14.8	(13.2-16.4)	19.0	(17.6-20.4)
RACE/ETHNICITY				
White/Non-Hisp.	15.9	(14.6-17.3)	24.0	(22.6-25.4)
Non-White or Hisp.	19.6	(13.3-26)	16.1	(9.4-22.8)
AGE				
18-24	15.2	(8.7-21.7)	4.7	(1-8.4)
25-34	19.0	(14.9-23.1)	16.5	(12.6-20.4)
35-44	18.5	(15.4-21.6)	15.7	(12.8-18.6)
45-54	21.4	(18.9-23.9)	24.5	(21.8-27.2)
55-64	16.0	(13.8-18.2)	33.8	(30.9-36.7)
65-74	11.1	(9.1-13.2)	40.8	(37.5-44)
75+	3.6	(2.5-4.8)	36.7	(33.5-39.9)
EDUCATION				
Less than H.S.	30.4	(22.8-38)	19.0	(14.3-23.7)
H.S. or G.E.D.	22.4	(19.7-25.1)	26.4	(23.9-28.9)
Some Post-H.S.	16.2	(13.8-18.6)	24.6	(22.1-27.1)
College Graduate	6.7	(5.3-8.1)	20.3	(18.3-22.3)
HOUSEHOLD INCOME				
Less than $15,000	32.9	(25.5-40.3)	21.3	(16.4-26.2)
$15,000-24,999	25.5	(21.2-29.8)	25.6	(21.9-29.3)
$25,000-34,999	19.0	(14.9-23.1)	23.3	(19.2-27.4)
$35,000-49,999	16.8	(13.3-20.3)	28.7	(25-32.4)
$50,000-74,999	14.2	(11.5-16.9)	25.3	(21.8-28.8)
$75,000+	7.8	(6.2-9.4)	22.2	(19.7-24.7)

In order to look at the use of other tobacco products besides cigarettes, all respondents were asked if they currently use chewing tobacco, snuff, or snus. Only 4.4 percent said they used one of these everyday or some days. All current and former cigarette smokers were asked if they were smoking fewer cigarettes but using more smokeless tobacco over the past year. Only 4.2 percent said this was the case. When asked the reason for this, most chose more than one of the five options. The only reason not chosen by a majority of those reducing cigarette use was "concern about your health".

Figure 11.2: Percentage of Current and Former Smokers by Age, 2010



A question was asked about policies concerning exposure to secondhand smoke. Most Iowans (79.2%) said they had rules against smoking anywhere in their home. However, 2.7 percent said they allowed smoking anywhere in the house, and 12 percent had no rules concerning smoking in the house.

If respondents were employed, they were asked in a typical week at work, how many hours they were in a room or car with smoke from someone else's cigarettes, cigars, or pipe. The vast majority (87%) said zero hours. One hour was mentioned by 6.3 percent. However the maximum response was 70 hours.

Comparison with Other States

In all the states and territories, smoking prevalence ranged from a low of 5.8 percent to a high of 26.8 percent. The lowest region was a territory. The lowest state had a prevalence of 9.1 percent. Iowa's current smoking prevalence of 16.1 percent was slightly below the median of 17.3 percent for all reporting states and territories. Smoking in both Iowa and the nation continues to decline.

Health Objectives for Iowa and the Nation

The goal for *Healthy People 2010* and 2020 is to reduce the percentage of smokers to 12 percent, while the goal for *Healthy Iowans 2010* is 18 percent. *Healthy Iowans 2010* also has a goal of reducing to 28 percent the proportion of smokers between the ages of 18 to 24 years and to 25

percent the proportion of smokers with a household income of less than $25,000. The prevalence of those reporting smoking is down in Iowa in 2010 to 16.1 percent. For ages 18 to 24 years, it is 15.7 percent. For household incomes less than $25,000, it is 28.3 percent. This does not achieve the national overall goal or the state goal for income. It does achieve the overall state goal and the state goal for ages 18 to 24 years. Although the number of landline interviews for those age 18 to 24 years is low making the confidence interval wide, this value is still statistically significantly lower than the *Healthy Iowans 2010* goal.

The *Healthy People 2020* goal for use of smokeless tobacco is only 0.3 percent. Iowa's prevalence of such use is 4.4 percent. There is a need for improvement in this area.

Iowa fell far short of the revised *Healthy Iowans 2010* goal of 75 percent and the *Healthy People 2020* goal of 80 percent of current smokers attempt to quit in the past year. At 52.6 percent the rate still falls more than 20 percentage points short of the goal.

However, Iowa exceeded the *Healthy People 2020* goal for recent smoking cessation success by adult smokers. 9.4 percent of former smokers said they had not smoked regularly for six months to a year, while the goal was 5 percent.

The *Healthy Iowans 2010* goal of 69 percent for people having rules against smoking in their home was surpassed with 79.2 percent saying they had such rules.

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12. ALCOHOL CONSUMPTION

Background

Consumption of alcohol is a very widespread practice in our society. However, a large number of people get into serious trouble because of their consumption of alcohol. Alcohol consumed on an occasional basis will pose little risk to most people and may even promote health. Even at this level, factors such as family history, health condition, and use of medications can mean a person should not drink at all. Furthermore, many people find it impossible to consume alcohol in a controlled manner.

Several million adults engage in risky drinking that could lead to alcohol problems. These patterns include binge drinking (drinking too much at one time) and chronic heavy drinking (drinking a large quantity of alcohol on a regular basis).[1]

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. From 2001–2005, there were approximately 79,000 deaths annually attributable to excessive alcohol use (3.5% of all deaths) in the United States).[2] In fact, excessive alcohol use is the 3rd leading lifestyle-related cause of death for people in the United States each year.[1]

Chronic alcohol use affects every organ and system of the body. It can lead to medical disorders (e.g., fetal alcohol syndrome, liver disease, cardiomyopathy, and pancreatitis). Heavy drinking can increase the risk for certain cancers. Drinking increases the risk of death from automobile crashes as well as recreational and on-the-job injuries. Furthermore, both homicides and suicides are more likely to be committed by persons who have been drinking.[3]

Annual health care expenditures for alcohol-related problems amount to $22.5 billion. The total cost of alcohol problems is $175.9 billion a year (compared to $114.2 billion for other drug problems and $137 billion for smoking). In comparison to moderate and non-drinkers, individuals with a history of heavy drinking have higher health care costs. Untreated alcohol problems waste an estimated $184.6 billion dollars per year in health care, business and criminal justice costs. Health care costs related to alcohol abuse are not limited to the user. Children of alcoholics who are admitted to the hospital average 62 percent more hospital days and 29 percent longer stays.[2]

Binge drinking is a serious problem. It has been a particularly serious problem on college campuses. Students who binge drink are more likely to damage property, have trouble with authorities, miss classes, have hangovers, and experience injuries than those who do not.

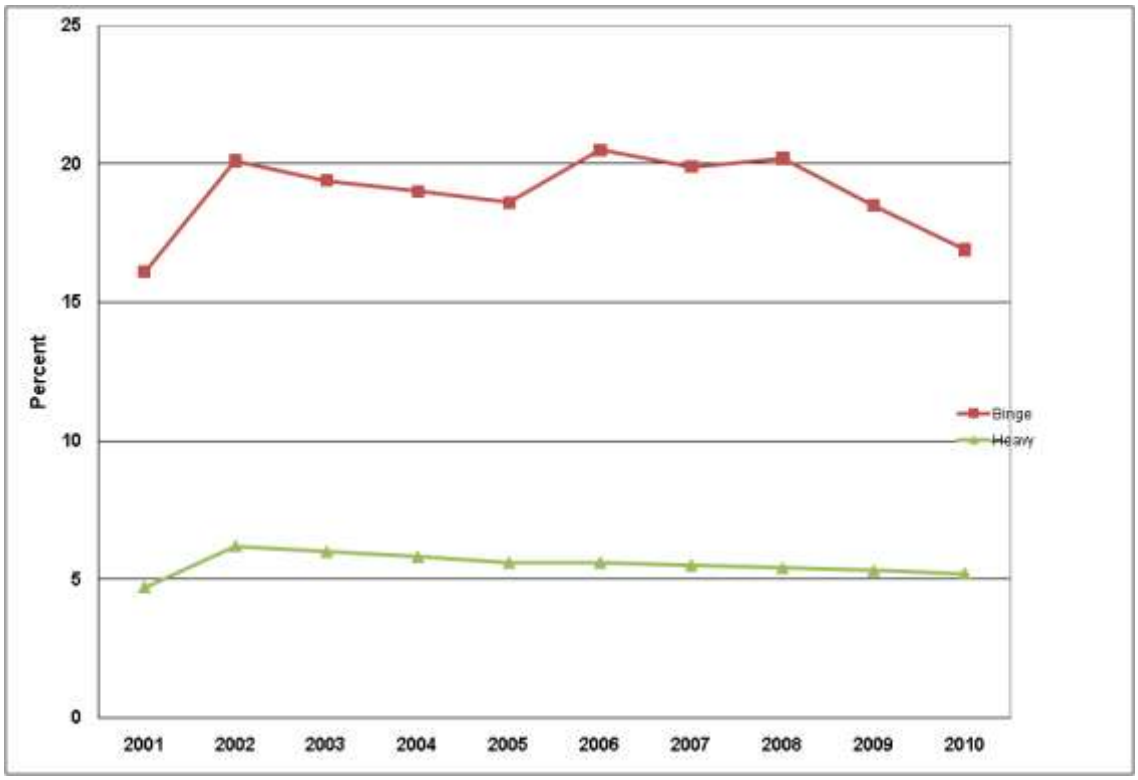
Among men, research indicates that greater alcohol use is related to greater sexual aggression. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[1]

Alcohol Consumption Results

In the BRFSS survey, a standard drink is defined as one 12-ounce beer, one 5-ounce glass of wine, or a drink with one shot of hard liquor.

In 2010, 55.4 percent of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 39.3 percent had only one drink. The median was two drinks. About 10.8 percent reported drinking five or more drinks per day on the average.

Figure 12.1: Trend of Binge and Chronic Heavy Drinking in Iowa, 2001-2010



In our analysis, chronic heavy drinking was defined to be greater than two drinks per day for men and one drink per day for women. According to this definition, 5.2 percent of all respondents were heavy drinkers. This continues a very slight but steady decrease that has been seen since 2002 (see figure 12.1).

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 6.2 percent of men were considered to be heavy drinkers, while only 4.3 percent of women were considered to be heavy drinkers. Age and race/ethnicity were also associated with the prevalence of heavy drinking. With respect to race/ethnicity, the other non-Hispanic category members were the highest and Hispanics were the lowest. In fact, the highest prevalence of heavy drinking in all groups studied was among the other race group (9.2%). With respect to age, only the highest and lowest age groups were much different in terms of prevalence. Only 1.1 percent of those respondents age 75 and over reported heavy drinking (see table 12.1). There were more heavy drinkers among men than women at all ages except the extremes. More women age 18 to 24 drank heavily than men (see figure 12.2).

Table 12.1
Heavy Drinking Among Iowans, 2010

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	5.2	(4.2-6.2)
SEX		
Male	6.2	(4.8-7.6)
Female	4.3	(3.1-5.5)
RACE/ETHNICITY		
White/Non-Hisp.	5.3	(4.3-6.3)
Black/Non-Hisp.	6.9	(0-13.9)
Other/Non-Hisp.	9.2	(0-19.1)
Hispanic	2.0	(0-4.8)
AGE		
18-24	8.7	(3.2-14.2)
25-34	4.1	(1.9-6.3)
35-44	6.0	(4-8)
45-54	6.2	(4.6-7.8)
55-64	5.2	(3.8-6.6)
65-74	4.1	(2.7-5.5)
75+	1.1	(0.4-1.7)
EDUCATION		
Less than H.S.	4.6	(1.7-7.5)
H.S. or G.E.D.	5.1	(3.5-6.7)
Some Post-H.S.	6.6	(4.2-9)
College Graduate	4.4	(3.2-5.6)
HOUSEHOLD INCOME		
Less than $15,000	4.3	(1-7.6)
$15,000- 24,999	7.1	(3-11.2)
$25,000- 34,999	5.7	(1.6-9.8)
$35,000- 49,999	6.0	(3.6-8.4)
$50,000- 74,999	4.3	(2.7-5.9)
$75,000+	6.4	(4.8-8)

Table 12.2
Binge Drinking Among Iowans, 2010

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	16.9	(15.3-18.5)
SEX		
Male	22.9	(20.4-25.4)
Female	11.3	(9.5-13.1)
RACE/ETHNICITY		
White/Non-Hisp.	17.1	(15.5-18.7)
Hispanic or other	15.0	(7.5-22.4)
AGE		
18-24	27.2	(18.8-35.6)
25-34	25.0	(20.3-29.7)
35-44	21.6	(18.5-24.7)
45-54	18.0	(15.5-20.5)
55-64	11.0	(9-13)
65-74	6.0	(4.2-7.7)
75+	1.4	(0.6-2.1)
EDUCATION		
Less than H.S.	10.8	(4.1-17.5)
H.S. or G.E.D.	15.0	(12.3-17.7)
Some Post-H.S.	19.2	(15.9-22.5)
College Graduate	18.2	(15.7-20.7)
HOUSEHOLD INCOME		
Less than $15,000	7.9	(4.2-11.6)
$15,000- 24,999	14.1	(9.4-18.8)
$25,000- 34,999	13.4	(8.3-18.5)
$35,000- 49,999	16.5	(12.6-20.4)
$50,000- 74,999	18.6	(15.1-22.1)
$75,000+	23.5	(20.4-26.6)

The definition of binge drinking changed for the BRFSS in 2006. A person is considered to binge if a man drinks more than five drinks or a woman drinks more than four drinks on one occasion. Previously the definition had been five drinks regardless of gender. Among all adult Iowans, 16.9 percent reported at least one binge episode in the last 30 days. This is a decrease from the 18.5 percent reported in 2009. Binge drinking prevalence has dropped sharply for the last two years.

Even with the lessened requirement on females from the new definition, many more males binge than females (22.9 percent versus 11.3 percent. In addition, the likelihood of bingeing decreases with age from 27.2 percent for 18 to 24 years old to only 1.4 percent for those 75 years old and

older. Unlike most risky behaviors, respondents with higher education and those with a higher household income were somewhat more likely to binge drink. Racial minorities are also

Figure 12.2: Heavy Drinking in Iowa by Age and Sex, 2010

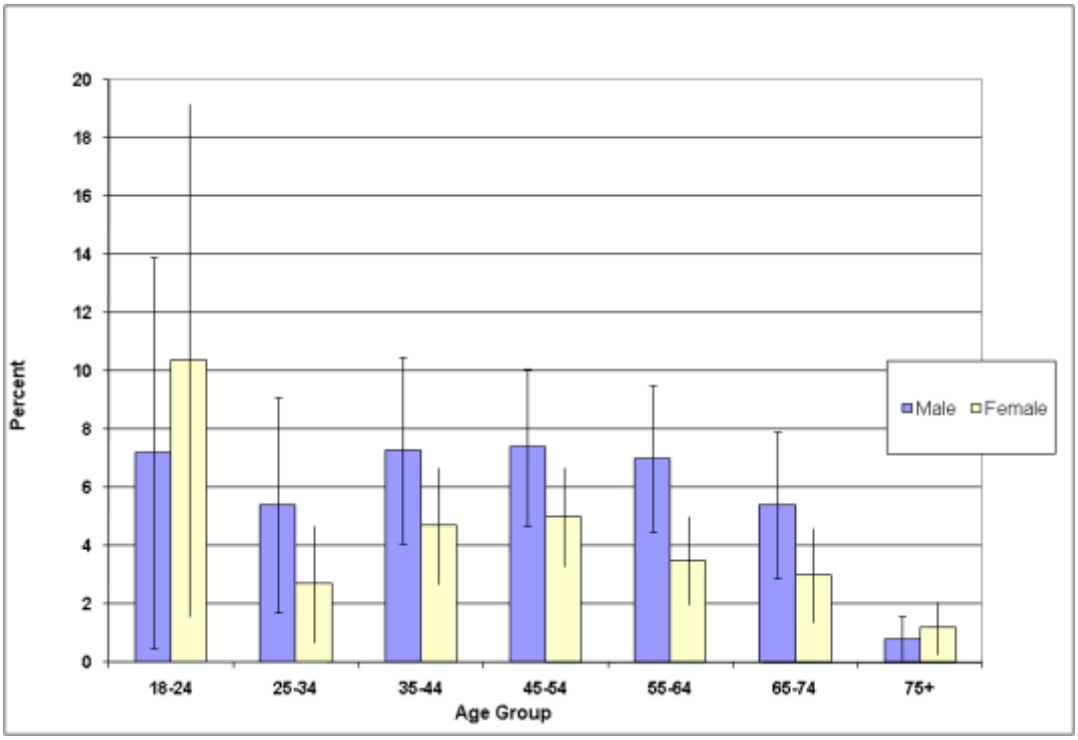
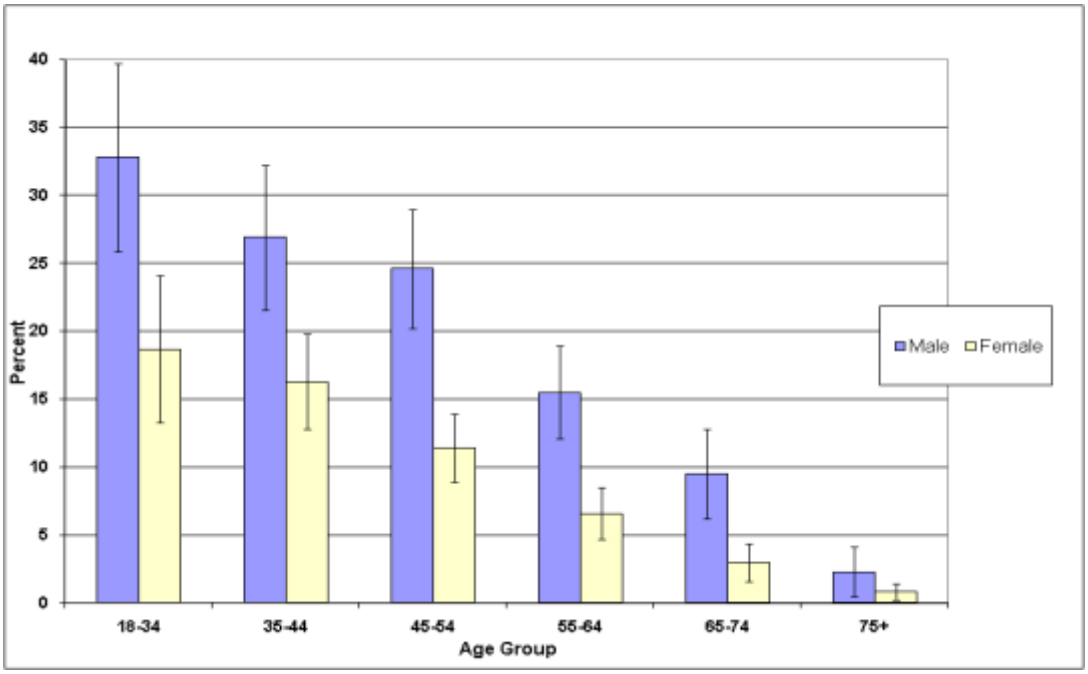


Figure 12.3: Binge Drinking in Iowa by Age and Sex, 2010



somewhat less likely to report binge drinking (see table 12.2). Men are more likely than women to binge drink at all age levels (see figure 12.3).

Comparison with Other States

The prevalence of people reporting heavy drinking in the states and territories ranges from two percent to 7.2 percent. The percentage in Iowa is slightly above the median for the states and territories. Iowa's figure is 5.2 percent compared to the median of 4.9 percent.

For binge drinking, the range is from a low of 6.6 percent to a high of 21.6 percent with a median of 15 percent. Iowa's figure of 16.9 percent is well above the median. The reduction in binge drinking in Iowa was reflected to a much lesser degree in the nation as a whole.

Health Objectives for the Nation

The *Healthy People 2010* goal for the nation for binge drinking is only 6%. No state has achieved that goal. The national median exceeds it by two and a half times. Iowa exceeds the national median by almost two percentage points. The *Healthy People 2020* goal is 24.3 percent. This modest goal is exceeded in Iowa.

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13. WOMEN'S CANCER SCREENING

Breast Cancer Screening

Background

Cancer is when a group of cells grows out of control. Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs mostly in women, but men can get breast cancer as well.[1]

Other than skin cancer, breast cancer is the most common cancer among women. After lung cancer, it is the second leading cause of cancer death in women. About 230,480 women in the United States will be found to have invasive breast cancer in 2011. About 39,520 women will die from the disease this year. Breast cancer death rates are going down. This is probably the result of finding the cancer earlier and improved treatment. Currently, there are two and a half million women living in the U.S. who have been treated for breast cancer.[1] In Iowa, 435 women died from breast cancer in 2009.[3]

The chance of getting breast cancer increases as a woman gets older. Nearly 8 out of 10 breast cancers are found in women over age 50.[1] Individual factors other than age that increase the risk for developing breast cancer include family history, a personal history of breast cancer, possession of certain genes (BRCA1 or BRCA2), race, earlier abnormal breast biopsy, a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, never having children or having a first child after age 30, consuming one or more alcoholic beverages per day, and lack of exercise.[1] However, many women develop breast cancer without having any of the usual known risk factors.

Early detection of breast cancer is key to surviving the disease, and regular screening is key to detecting the disease early. There may be no detectable symptoms apart from screening until the disease is quite advanced.

Among the methods for early detection of breast cancer are clinical breast exam (CBE) and mammography. CBE is a clinical examination that involves a health care provider's physical examination of breast tissue. Mammography involves an x-ray examination of the breast and can detect abnormalities in the breast before they can be felt. Because the risk of developing breast cancer increases as women get older, mammography, with its increased sensitivity, is recommended for older women, while clinical breast exams should be part of the regular health routine for all adult women.

Due to increased survival rates for breast cancer when detected early, the National Cancer Institute recommends:

- Women age 40 years and older should be screened every one to two years with mammography.
- Women at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of screening.[4]

Most cancer organizations also believe that women should have a clinical breast exam by a health care provider as part of regular, routine care.

Although no screening method is foolproof, there is no doubt that screening for breast cancer saves lives.

Breast Cancer Screening Results

In 2010, 89.5 percent of women surveyed reported ever having a clinical breast examination (CBE) by a physician. The percentage increased with education and household income. It was more prevalent for women in the middle age groups than for those both younger and older (see table 13.1).

Table 13.1: Breast Examination Measures for Iowa Women, 2010

DEMOGRAPHIC GROUPS	Ever had a Mammogram		Had Mammogram in Last 2 Years		Ever had Clinical Breast Exam	
	Age 40 and over					
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL FEMALES	92.4	(91.3-93.6)	76.0	(74.3-77.8)	89.5	(87.7-91.3)
AGE						
18-39					84.0	(79.6-88.5)
40-49	85.4	(82.1-88.8)	72.4	(68.1-76.8)	95.1	(93-97.2)
50-59	95.4	(93.8-97.1)	77.8	(74.6-81.1)	96.6	(95-98.2)
60-69	95.8	(94.1-97.6)	82.2	(79-85.4)	93.4	(91.3-95.6)
70 & up	93.5	(91.8-95.2)	72.9	(70-75.9)	85.0	(82.6-87.4)
EDUCATION						
Less than H.S.	78.7	(70.5-86.9)	57.1	(48.5-65.7)	69.5	(60.7-78.3)
H.S. or G.E.D.	91.7	(89.6-93.8)	72.9	(70-75.8)	85.2	(81.3-89.1)
Some Post-H.S.	93.7	(91.9-95.5)	77.3	(74.2-80.4)	90.8	(87.7-93.9)
College Graduate	95.0	(93.2-96.9)	82.8	(79.7-85.9)	96.7	(94.9-98.5)
HOUSEHOLD INCOME						
Less than $15,000	82.1	(76.4-87.9)	54.2	(47.3-61.1)	75.1	(65.1-85.1)
$15,000- 24,999	87.7	(84-91.5)	63.9	(58.8-69)	85.4	(81.1-89.7)
$25,000- 34,999	92.9	(89.5-96.3)	74.3	(68.8-79.8)	88.9	(83.8-94)
$35,000- 49,999	94.2	(91.4-96.9)	80.5	(76.2-84.8)	92.8	(89.1-96.5)
$50,000- 74,999	95.5	(93.1-97.9)	84.0	(79.9-88.1)	95.3	(92.2-98.4)
$75,000+	95.5	(93.6-97.5)	84.0	(80.3-87.7)	98.0	(96.4-99.6)

When asked if they had ever had a mammogram, 92.4 percent of all female Iowa respondents ages 40 and older reported having one. Women in the middle age groups were more likely to have a mammogram than those in younger and older groups. Also, women with higher education and income were more likely to have a mammogram (see table 13.1).

When asked if they had a mammogram in the past two years, 76 percent of all Iowa women over age 40 said they had. This is a slight decrease from 76.5 percent in 2008 (see figure 13.1). The percentages for women in the middle age groups were higher than those for women in younger

and older groups. In addition, the women with a higher education level and with a higher household income tended to have higher percentages of having a mammogram in the past two years (see table 13.1).

Comparison with Other States

In all states and territories, the percent of women age 40 and older who have had a mammogram in the past two years ranged from 63.8 percent to 83.6 percent. Iowa's figure of 76 percent is a little better than the median of 75.4 percent.

Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 70 percent of women age 40 and older who have had a mammogram within the preceding two years. For *Healthy People 2020* it is 81.1 percent. The *Healthy Iowans 2010* goal is 85 percent. Since 76 percent of Iowa women age 40 years old and older has had mammograms within the past two years, the goal has been met for the nation's 2010 goal but not for the *Healthy People 2020* goal or for Iowa.

Figure 13.1: Cancer Screening in Iowa Women by Year, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Pap test	86.8		88.1	86.6	86.0	84.6	86.1		84.0		80.6
Mammogram	76.2		76.8	76.2	75.3	75.5	77.5		76.5		76.0

Cervical Cancer Screening

Background

Cancer of the cervix begins in the lining of the cervix, the lower part of the uterus (womb). This cancer does not form suddenly. First, some cells begin to change from normal to pre-cancer and then to cancer. This can take a number of years, although sometimes it happens more quickly. These changes may go away without any treatment. More often, they need to be treated to keep them from changing into true cancer.[2]

Approximately 12,710 new cases of invasive cervical cancer and 4,290 cervical cancer-related deaths were projected to occur in 2011 in the United States.[2] Rates in the United States have decreased to less than half their level in the early 1970s. Overall rates of US women diagnosed with invasive cervical cancer declined 17 percent between 1998 and 2002.

The most important risk factor for cervical cancer is infection with the human papiloma virus (HPV). This virus is transmitted sexually. A vaccine now exists for HPV. Not all women infected with HPV get cervical cancer. Some other risk factors that may play a role are smoking, HIV infection, chlamydia infection, a diet low in fruit and vegetables, and obesity.[2]

The principal screening test for cervical cancer is the Papanicolaou (Pap) test. This test allows the cellular changes in the cervix to be detected when they are precancerous or at an early stage. Early detection through Pap tests can dramatically lower the incidence of invasive disease and can nearly eliminate deaths from cervical cancer.

The American Cancer Society recommends annual Pap tests begin about three years after a woman begins having sexual intercourse, but no later than age 21 years. The test should be done every year if the regular Pap test is used, or every 2 years if the newer liquid-based Pap test is used. At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams when she is over thirty years old. More frequent tests are recommended if the immune system is weakened or other risk factors are present. Pap tests are not necessary for women who have had a total hysterectomy that was not due to cancer.[2]

Cervical Cancer Screening Results

When asked if they ever had a Pap test, 92.8 percent of female respondents who had not had a hysterectomy reported having it. The proportion of women who ever had a Pap test increased with level of education and household income. It was higher in the middle age groups than at either extreme. These numbers were so nearly at the maximum of 100% that there was little room to show differences (see table 13.2).

In 2010, 80.6percent of female respondents reported that they had their last Pap test within the last three years. This is a decrease from 84 percent in 2008. The prevalence of having a pap test has fallen since 2006 (see figure 13.1). The percentage having a Pap test within three years increased with education and income. Women age 75 years and older had the lowest percentage (42.3%), while women who had a household income of $75,000 or higher had the highest percentage (94%) (see table 13.2).

Table 13.2: Proportion of Iowa Women Having Pap Test, 2010

DEMOGRAPHIC GROUPS	Ever had a Pap test		Had Pap test in last 3 years	
	%	C.I. (95%)	%	C.I. (95%)
FEMALES	92.8	(90.8-94.8)	80.6	(78.2-83)
AGE				
18-34	82.5	(76.5-88.5)	80.1	(74.1-86.2)
35-44	98.6	(97.4-99.8)	90.7	(87.8-93.6)
45-54	98.8	(97.8-99.8)	88.8	(85.9-91.7)
55-64	98.4	(97-99.8)	83.8	(80.1-87.5)
65-74	97.8	(96.6-98.9)	75.6	(70.9-80.2)
75+	89.0	(86.4-91.6)	42.3	(36.9-47.7)
EDUCATION				
Less than H.S.	81.7	(72.5-90.9)		See Note.
H.S. or G.E.D.	90.0	(86.1-93.9)	69.1	(64.3-73.8)
Some Post-H.S.	93.0	(89.3-96.7)	81.1	(76.2-86)
College Graduate	97.8	(96.2-99.4)	92.2	(90-94.4)
HOUSEHOLD INCOME				
Less than $15,000	85.2	(75.2-95.2)		See Note.
$15,000- 24,999	94.2	(91.3-97.1)	69.8	(63.5-76.1)
$25,000- 34,999	95.0	(90.9-99.1)	77.9	(71-84.8)
$35,000- 49,999	96.4	(93.5-99.3)	86.8	(82.3-91.3)
$50,000- 74,999	96.7	(93.8-99.6)	88.4	(84.3-92.5)
$75,000+	97.3	(93.8-100)	94.0	(89.7-98.3)

Note: Due to unreliable data for this group, it was combined with the next one.

Comparison with Other States

In all states and territories the percent of adult women who have had a pap test in the past three years ranges from 67.8 percent to 88.9 percent. Iowa's figure of 80.6 percent is a little below the median of 80.9 percent. Both Iowa and the nation have seen a decline in Pap test prevalence since 2006 with Iowa's decline being more pronounced.

Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 97% in the proportion of women over the age of 18 who have ever had a Pap test. The figure for 2010 of 92.8 percent falls short of this goal and is moving in the wrong direction.

Both the national and Iowa health objectives for the year 2010 also include an increase to at least 90% in the proportion of women over the age of 18 who have had a Pap test in the last three years. For *Healthy People 2020* it is 93 percent. The figure for 2010 of 80.6 percent falls short of all these goals and also is moving in the wrong direction.

References

1. American Cancer Society. Breast Cancer Overview, Atlanta, Georgia: American Cancer Society, 2011. Available at: http://www.cancer.org.
2. American Cancer Society. Cervical Cancer Overview. Atlanta, Georgia: American Cancer Society, 2011. Available at: http://www.cancer.org.
3. Iowa Department of Public Health. *2009 Vital Statistics of Iowa*. 2010. http://www.idph.state.ia.us/apl/common/pdf/health_statistics/2009/vital_stats_2009.pdf.
4. National Cancer Institute, *Learn About Mammograms*. 2010. http://www.cancer.gov/.

14. COLORECTAL CANCER SCREENING

Background

Colorectal cancer is the second leading cause of cancer-related deaths in both the United States and Iowa. Colorectal cancer occurs in the colon or rectum. Sometimes it is called colon cancer, for short. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.

An estimated 141,210 new cases of colon and rectal cancer exist in the United States in 2011.[1] There are estimated to be 49,380 deaths.[1] Incidence and mortality rates have been decreasing for most of the last two decades. The decline has been steeper in the most recent time period, partly due to an increase in screening, which can result in the detection and removal of colorectal polyps before they progress to cancer.[3]

Although the exact causes of colorectal cancer are unknown, risk factors include:

- **Age** – Approximately 93 percent of colorectal cancer cases occur in people age 50 and older, and the risk of developing the disease increases with age.
- **Family History** –Those who have family members diagnosed with colorectal cancer or polyps are at high risk for the disease.
- **Personal History** – Persons who have inflammatory bowel diseases are at increased risk.

Modifiable risk factors include smoking, heavy alcohol use, obesity, a diet high in red meat, and physical inactivity.

Colorectal cancer usually develops from abnormal growths known as precancerous polyps in the colon and rectum. In the early stages there are often no symptoms. Screening tests can detect polyps so they can be removed before they turn into cancer.[2]

The U.S. Preventive Services Task Force recommends that men and women who are not at special risk begin regular screening for colorectal cancer at age 50.[4] If everybody aged 50 to 75 had regular screening tests, as many as 60 percent of deaths from colorectal cancer could be prevented. Recommended options include the following:

- **A fecal occult blood test (FOBT).** An FOBT is a chemical test that detects blood that is not visible in a stool sample. If results are normal, repeat the FOBT annually.
- **Flexible Sigmoidoscopy.** Flexible sigmoidoscopy uses a hollow, lighted tube to visually inspect the wall of the rectum and part of the colon. If results are normal, repeat flexible sigmoidoscopy every five years.
- **Colonoscopy.** This is a test that uses a hollow, lighted tube to inspect the interior walls of the rectum and the entire colon. If it is normal, the test should be repeated every 10 years.
- **Double-contrast barium enema.** This is a series of x-rays of the colon and rectum. If it is normal, the test should be repeated every five years.
- **Virtual Colonoscopy.** This is a three-dimensional x-ray of the colon.[1]

The colonoscopy has the advantage over the other tests because it can remove polyps as well as detect them. The FOBT has the advantage that it is simplest and least expensive to use, but it cannot find pre-cancerous polyps.

Colorectal Cancer Screening Results

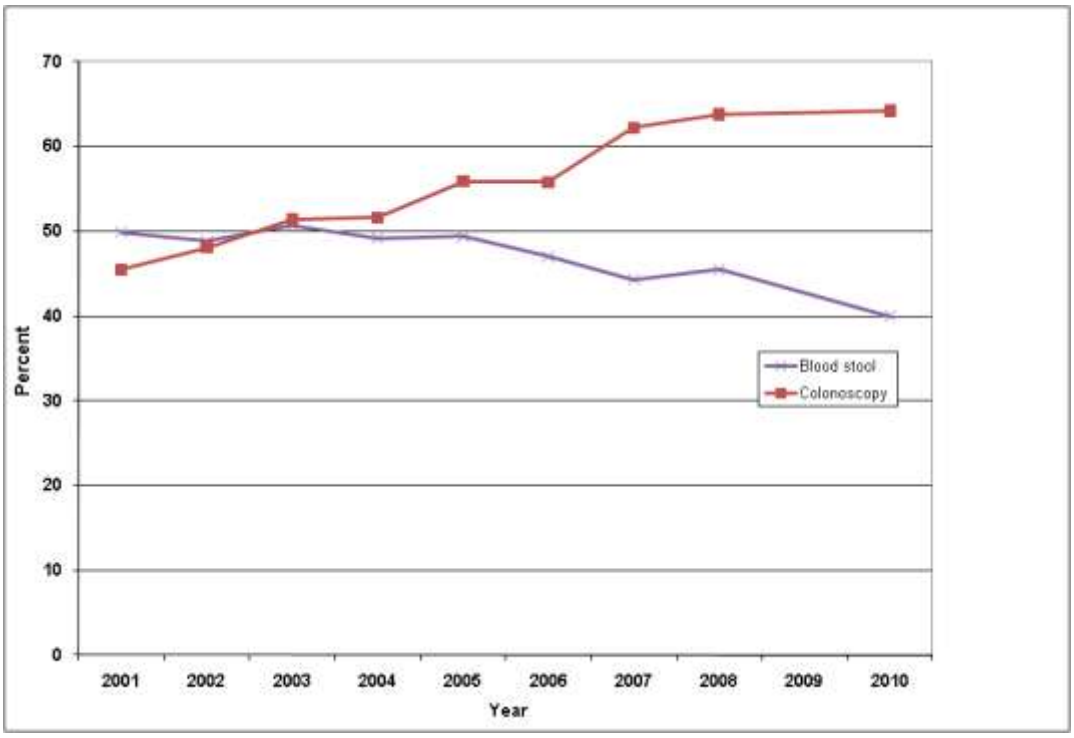
In 2010, 40 percent of Iowans 50 years old or older reported using a home blood-stool testing kit (FOBT). This is a decrease from the 45.5 percent found in 2008 continuing a general decline in this screening method that has been seen since 2003 (see figure 14.1).

Females reported a significantly higher percentage of the FOBT use than males (43.5% versus 35.9%). Education was also related to use of the test. Respondents with less than a high school education were least likely to use it (30.4%). College graduates were the most likely to have used it (46.6%) (see table 14.1).

Of all respondents 50 years old or older, 17.4 percent had used the blood stool test within the past two years. This was also lower than the 2008 level, and has continued to decrease. A higher rate was found among those with a higher education. The lowest prevalence was among those with less than a high school education (13.3%). The highest prevalence was among those with an annual household income of $25,000 to $34,999 (19.8%) (see table 14.1).

In 2010, 64.2 percent of Iowans 50 years old or older reported having a sigmoidoscopy or colonoscopy screening test. This was an increase from the 63.8 percent found in 2008. This continues an upward trend seen over the last few years (see figure 14.1).

Figure 14.1: Ever Had Colorectal Cancer Screening Test by Year, 2001-2010



As was true with FOBT, education made the most difference in who was more likely to have the test. Those who had less than a high school education were least likely to have the test (47%). Those with a college education or better were most likely to have the test (72.3%). Respondents with a higher annual household income and who were female were also somewhat more likely to have the test (see table 14.1).

Table 14.1: Prevalence of Colorectal Cancer screening in Iowans 50 Years Old or Older, 2010

DEMOGRAPHIC GROUPS	Ever Had Blood Stool Test		Had Blood Stool Test in Past Two Year		Ever Had Sigmoidoscopy/ Colonoscopy		Met Screening Criteria from any Method	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	40.0	(38.2-41.8)	17.4	(16-18.8)	64.2	(62.4-66)	61.7	(60-63.4)
SEX								
Male	35.9	(33.2-38.6)	17.0	(14.8-19.2)	62.5	(59.8-65.2)	60.5	(57.7-63.3)
Female	43.5	(41.3-45.7)	17.9	(16.1-19.7)	65.6	(63.4-67.8)	62.7	(60.6-64.9)
EDUCATION								
Less than H.S.	30.4	(23.7-37.1)	13.3	(8.2-18.4)	47.0	(39.9-54.1)	46.4	(39.4-53.4)
H.S. or G.E.D.	37.7	(35-40.4)	17.0	(14.8-19.2)	63.0	(60.3-65.7)	61.3	(58.6-64)
Some Post-H.S.	38.7	(35.4-42)	18.0	(15.3-20.7)	61.7	(58.4-65)	58.9	(55.5-62.3)
College Graduate	46.6	(43.3-49.9)	18.6	(16.1-21.1)	72.3	(69.2-75.4)	68.9	(65.7-72.1)
HOUSEHOLD INCOME								
Less than $15,000	35.3	(29.6-41)	16.9	(12.4-21.4)	53.6	(47.5-59.7)	52.0	(45.8-58.1)
$15,000- 24,999	39.9	(35.4-44.4)	16.8	(13.5-20.1)	59.0	(54.5-63.5)	54.9	(50.3-59.6)
$25,000- 34,999	44.8	(39.7-49.9)	19.8	(15.5-24.1)	64.5	(59.4-69.6)	63.0	(58.1-68)
$35,000- 49,999	39.1	(34.8-43.4)	15.8	(12.5-19.1)	66.2	(61.7-70.7)	62.2	(57.7-66.6)
$50,000- 74,999	39.6	(35.1-44.1)	16.5	(13.2-19.8)	66.9	(62.4-71.4)	66.6	(62.2-71)
$75,000+	38.6	(34.7-42.5)	18.2	(15.1-21.3)	68.4	(64.5-72.3)	67.4	(63.5-71.2)

Having a colonoscopy was far more common than having a sigmoidoscopy (95.6 percent compared to only 4.4 percent for sigmoidoscopy). Nearly everyone who had one of these tests has a colonoscopy.

Since the rate of FOBT and the rate of sigmoidoscopy/colonoscopy do not follow the same trend, it seems likely that the percent of people being adequately screened for colorectal cancer may actually be somewhere in between the two with only the preferred method undergoing a change. To determine the percentage of Iowans being adequately screened the percent of respondents who had either screening method within the proper time interval was calculated. The proper time interval for the blood stool test is the past year, while the proper time interval for sigmoidoscopy is the past five years, and the proper interval for colonoscopy is the past ten years. The result was that 61.7 percent of Iowans 50 years old and older had, at least, one of the colorectal screening methods within the prescribed time period. Respondents with less than a high school education had the lowest percentage (46.4%), while college graduates had the highest (68.9%) (see Table 14.1).

Since 2004, a number of additional questions were included in the survey concerning colorectal cancer screening. A few findings from these are given here.

Respondents 50 years old and older reported that a health care professional talked to him or her about colorectal cancer screening in 63.4 percent of the cases. When the health care professional talked about screening, 84.8 percent recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 84 percent then had the testing.

Out of all respondents 50 years old and older, 58.4 percent reported seeing articles or advertising in the past six months about colorectal cancer screening. Television was the main medium of exposure to this advertising (52.6%). Over half of the respondents (57.3%) considered that they had a low risk of colorectal cancer. Only four percent considered it was high. When asked why they did not have the recommended test or why they did not plan to be tested, one of the most common answers was not having any symptoms (28.3%). Colorectal cancer does not necessarily have symptoms.

Comparison with Other States

The proportion of people age 50 and older who have ever had a sigmoidoscopy or colonoscopy ranges from 37.9 percent to 75.4 percent. The lowest three are all territories; the lowest state has a prevalence of 54.1 percent. Iowa's prevalence of 64.1 percent is almost equal to the median of 64.4 percent. The use of sigmoidoscopy/colonoscopy continues to grow nationwide as well as in Iowa.

Health Objectives for the Nation

The *Healthy People 2020* goal is for 70 percent of people age 50 and older to be screened according to the latest guidelines. Iowa's figure of 61.7 percent does not reach the goal.

References

1. American Cancer Society. Colorectal Cancer Overview, Atlanta, Georgia: American Cancer Society, 2011. Available at: http://www.cancer.org.
2. Centers for Disease Control and Prevention. Colorectal Cancer: Screening Saves Lives. CDC publication #99-6948, 2011. Available at http://www.cdc.gov/cancer/colorectal/basic_info/screening/.
3. Centers for Disease Control and Prevention. Vital Signs: Colorectal Cancer Screening, Incidence, and Mortality --- United States, 2002—2010, 2011.
4. Agency for Healthcare Research and Quality, The Guide to Clinical Preventive Services 2010 – 2011: Recommendations of the U.S. Preventive Services Task Force, 2010.

15. CANCER SURVIVORSHIP

Background

For the past 40 years we have been fighting "a war on cancer". While cancer is still a very common disease and the second most common cause of death in The United States, more people are surviving cancer. Overall, the American Cancer Society predicts 1,596,670 new cancer cases in the United States and 571,950 deaths in 2011. However, death rates for all cancer types fell by 1.9 percent a year from 2001 to 2007 in men and by 1.5 percent a year in women from 2002 through 2007.[1] Steady overall declines in cancer death rates have meant about 898,000 who would have died prematurely from cancer in the past 17 years did not.

These cancer survivors have unique needs and concerns as they move forward with their lives. There is the fear that their cancer may return. There are side effects of the cancer treatments. The cancer may still be present but being held in check for the moment. The survivor may have been or still be experiencing great pain from either the cancer or the treatments for it.

It is worthwhile, then, to try to look at the condition of cancer survivors in Iowa, as more than half of them are living more than five years after their diagnosis.

Cancer Survivorship Results

In 2010, 7.6 percent of respondents had ever been told they had cancer. People who reported being cancer survivors were more likely older, women, White non-Hispanic, having lower annual household income, and having a lower level of education (see Table 15.1). The lowest prevalence was found in people age 25 to 34 years (0.4%), while the highest prevalence was found among people age 75 and older (23.4%).

The age at which a survivor had been told they had cancer was quite variable ranging from 19 to 95 years. The median age when a cancer survivor had been told they had cancer was 58 years. Nearly one fourth (23.2%) of cancer diagnoses had been between ages 60 and 70 years.

Of all the Iowa cancer survivors 11.4 percent were currently receiving treatment.

When asked what type of cancer they had, the most frequent responses were breast (16.9%), prostate (11.4%), melanoma (10.9%), and other skin cancer (25.5%).

Of all cancer survivors, 26.9 percent had received a summary of cancer treatments received. A set of instructions for follow-up was received by 68.1 percent of survivors. For about 69.7 percent these instructions were written or printed.

Health insurance was reported to have paid for all cancer treatments for 93.6 percent of cancer survivors. Having insurance denied because of cancer was reported by 5.8 percent of cancer survivors.

Table 15.1: Percentage of Iowans who are Cancer Survivors, 2010

DEMOGRAPHIC GROUPS	Cancer Survivor	
	%	C.I. (95%)
TOTAL	7.6	(6.7-8.6)
SEX		
Male	6.1	(4.8-7.3)
Female	9.1	(7.8-10.5)
RACE/ETHNICITY		
White/Non-Hisp.	8.1	(7.1-9.0)
Non-White or Hisp.	2.6	(0.7-4.5)
AGE		
18-24	0.5	(0-1.6)
25-34	0.4	(0-1.1)
35-44	1.8	(0.6-2.9)
45-54	5.3	(3.2-7.4)
55-64	11.1	(8.5-13.8)
65-74	21.2	(17.4-25.0)
75+	23.4	(19.3-27.5)
EDUCATION		
Less than H.S.	8.3	(5.0-11.7)
H.S. or G.E.D.	8.5	(6.8-10.3)
Some Post-H.S.	7.2	(5.3-9.1)
College Graduate	7.0	(5.6-8.5)
HOUSEHOLD INCOME		
Less than $15,000	11.8	(7.5-16)
$15,000- 24,999	9.9	(6.8-13)
$25,000- 34,999	10.9	(7.1-14.7)
$35,000- 49,999	9.2	(6.5-12)
$50,000- 74,999	5.5	(3.7-7.3)
$75,000+	4.8	(3.3-6.2)

Only eight percent of cancer survivors reported having participated in a clinical trial for treatment of their cancer.

Physical pain from cancer or treatment was reported for 5.4 percent of cancer survivors. The majority of these reported their pain was under control.

References

1. Reuters. Cancer Death Rates Continue Drop: Report, 6/19/2011.

16. DISABILITY

Background

The World Health Organization's *International Classification of Impairments, Disabilities, and Handicaps*, defines disability as "any restriction (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being." Impairment is defined as "any loss or abnormality of psychological, physiological, or anatomical structure or function.[2]

Chronic physical, mental, and emotional conditions can limit the ability of adults to carry out important activities such as working and doing everyday household chores. With advancing age, an increasing percentage of adults experience limitation of activity.

The latest available Census estimates for 2006 found that 38.4 million people 16 years old and older in the United States and 361,000 in Iowa had a disability that prevented or limited their ability in some way.[3]

Arthritis and other musculo-skeletal conditions are the most frequently reported cause of activity limitation among both working-age and older adults. However, people can experience a wide range of types and severity of impairments.

Disability may not only be considered a health condition. It may also be seen as a demographic condition that affects health. This source of health disparities may arise due to difficulties with health access faced by the disabled deriving from physical, financial, or social sources. Special considerations need to be made for the disabled to participate in the healthcare system on an equal basis with the non-disabled.[1] Having a disability does not necessarily need to be a barrier to good general health in unrelated areas.

Many disabled Americans use Assistive Technology Devices (ATDs) to accommodate mobility impairments and other sensory and mental impairments. These can allow a person with a disability to work and otherwise live an independent life.

Disability Results

In 2010, 17.6 percent of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is up from the 16.4 percent reported in 2009.

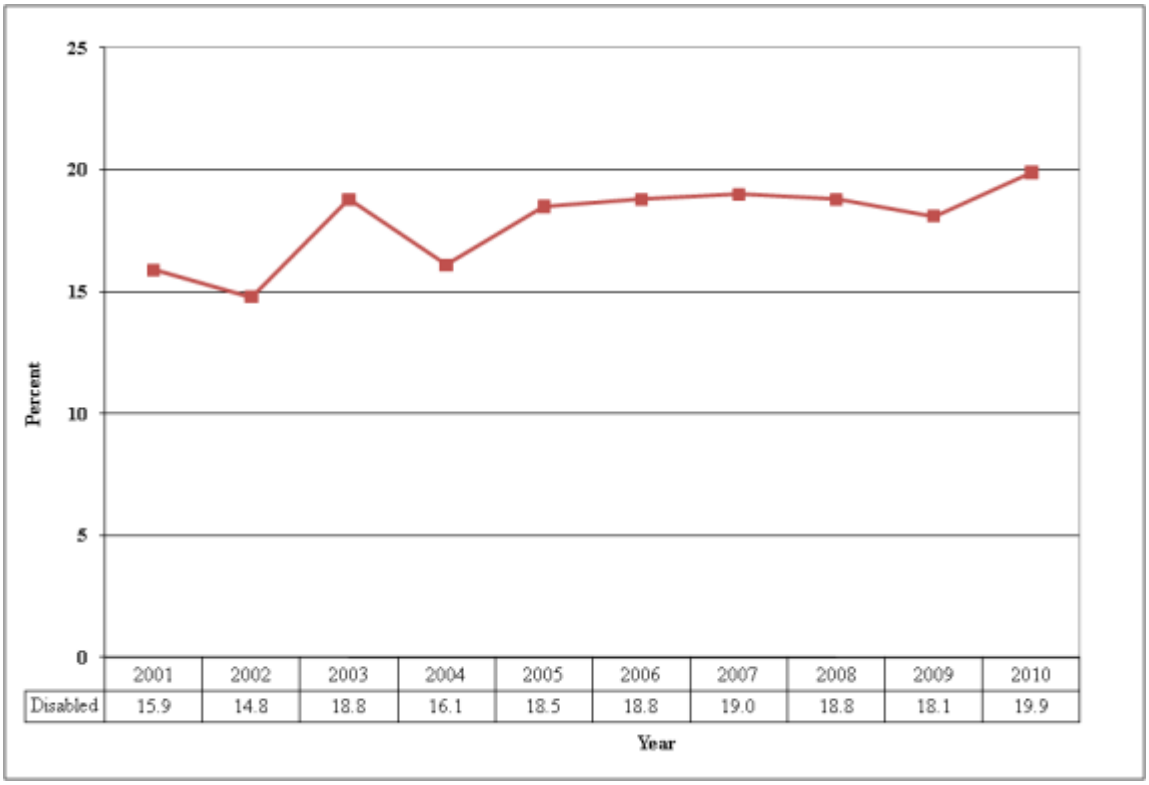
When asked whether they had a health problem requiring the use of special equipment, 6.9 percent of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is up from 6.5 percent in 2009.

Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2010, 19.9 percent of respondents were considered to have a disability. This is an increase from the 18.1 percent in 2009 and is the highest ever recorded in this survey. The trend in people reporting disability, however, does not show a

consistent pattern. This year's figure shows the first real increase in several years (see figure 16.1).

As shown in Table 16.1, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Non-Whites and Hispanics reported a lower percentage of disability than White non-Hispanics. Of the five demographic

Figure 16.1: Disability Trend by Year, 2001 – 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Disabled	15.9	14.8	18.8	16.1	18.5	18.8	19.0	18.8	18.1	19.9

variables analyzed, people age 18 to 24 years reported the lowest percentage (6.6%). Those with household incomes less than $15,000 reported the highest percentage of disability (42.7%). The second highest reporting group was those age 75 years and over (38.5%). This group is the most rapidly growing group in the population.

Comparison with Other States

The percent of people reporting disability in the U.S. ranged from 11.9 percent to 30.3 percent. The lowest three were all territories so that the lowest state prevalence was 18 percent. Iowa's figure of 19.9 percent was well below the median of 22.7 percent. The prevalence of disability increased in both Iowa and the nation. In spite of Iowa's increase, its position relative to the other states and territories is still quite favorable. This position is even better considering Iowa's large elderly population and that the comparisons were not age adjusted.

Table 16.1
Percent Reporting Being Disabled, 2010

Demographic Groups	Disability	
	%	C.I. (95%)
TOTAL	19.9	(18.7-21.2)
SEX		
Male	19.7	(17.7-21.8)
Female	20.1	(18.6-21.7)
RACE/ETHNICITY		
White/Non-Hisp.	20.0	(18.7-21.3)
Non-White or Hisp.	18.4	(12.6-24.2)
AGE		
18-24	6.6	(2.2-11)
25-34	11.3	(7.8-14.9)
35-44	13.4	(10.7-16.1)
45-54	19.8	(17.2-22.4)
55-64	28.3	(25.5-31)
65-74	31.3	(28.2-34.3)
75+	38.5	(35.3-41.7)
EDUCATION		
Less than H.S.	27.6	(21-34.2)
H.S. or G.E.D.	22.2	(19.9-24.5)
Some Post-H.S.	20.3	(17.9-22.7)
College Grad.	15.7	(13.7-17.6)
HOUSEHOLD INCOME		
<$15,000	42.7	(35-50.5)
$15,000- 24,999	30.4	(26.7-34.1)
$25,000- 34,999	24.2	(19.9-28.4)
$35,000- 49,999	18.3	(15.3-21.3)
$50,000- 74,999	16.2	(13.5-18.9)
$75,000+	11.2	(9.4-13)

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3. U. S. Bureau of the Census. 2006 American Community Survey. 2007.

17. INJURY CONTROL

Background

The 2010 BRFSS examines three areas related to injury control. These are falls, seatbelt use, and drinking and driving.

Falls

Unintentional falls are the leading cause of both fatal and nonfatal serious injuries among the fastest growing segment of the U.S. population, older adults. In the United States, one of every three people age 65 years and older falls each year.[4] The leading injuries resulting from falls are traumatic brain injuries (TBI), hip fractures, other fractures, and damage to internal organs.

In 2000, the total direct cost of all fall injuries for people 65 and older exceeded $19 billion.[3] The financial toll for falls by older adults is expected to increase as the population ages, and may reach $54.9 billion by 2020 (adjusted to 2007 dollars).[3] This does not consider the total costs of disabilities resulting from falls, only the direct costs.

Elderly persons who survive a fall experience significant morbidity. Hospital stays are almost twice as long in elderly patients who are hospitalized after a fall than in elderly patients who are admitted for another reason. Compared with elderly persons who do not fall, those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities, and they are at greater risk for subsequent institutionalization.[4]

In 2007, over 18,800 people 65 and older died from injuries related to unintentional falls. In 2009, about 2.2 million people 65 and older were treated in emergency departments for nonfatal injuries from falls, and more than 581,000 of these patients were hospitalized.[4] In Iowa in 2009, the number of fatal falls was 442 with 355 being among those 75 years of age or older.[6] The number of people age 65 years and older is projected to double in the next 50 years which means even a larger number of falls are to be expected. For people age 85 years and older, relative growth rates are even faster.

One of the strongest predictors of a fall is having sustained a previous fall.[1] A fall is often a marker of increasing fragility, functional decline, or neurological impairment, and may indicate the need for a secondary prevention strategy (e.g., hip protectors to prevent hip fractures.)

Falls Results

The BRFSS defines a fall as when a person unintentionally comes to rest on the ground or another lower level. Respondents age 45 years and older were asked if they had experienced a fall in the last three months. In this group, 17.9 percent said they had. Of those who had fallen, 27.2 percent said that it injured them. In this instance, injury was defined as limiting activity for at least a day or causing them to see a doctor.

More of the people who reported falls had a lower level of education or a lower household income. Males and people who were non-White or Hispanics also reported a higher prevalence

of falls than other groups. The group reporting the highest prevalence of falls was those with less than a high school education (25.4%), while the group with the lowest prevalence was those with annual household incomes between $50,000 and $75,000 (13.8%) (see table 17.1).

Table 17.1: Prevalence of factors related to Injury in Iowans, 2010

DEMOGRAPHIC GROUPS	Falls in Last 3 Months		Always or Usually Wear Seatbelts		Drink and Drive	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	17.9	(16.5-19.3)	95.7	(94.9-96.5)	4.7	(3.4-5.9)
SEX						
Male	18.8	(16.6-21)	93.1	(91.5-94.7)	5.5	(3.8-7.2)
Female	17.2	(15.6-18.8)	98.1	(97.5-98.7)	3.6	(1.6-5.6)
RACE/ETHNICITY						
White/Non-Hisp.	17.7	(16.3-19.1)	96.1	(95.3-96.8)	4.7	(3.4-6.1)
Non-White or Hisp.	21.0	(13.1-28.9)	90.7	(84.2-97.2)	3.9	(0-8.3)
AGE						
18-24			95.8	(92-99.6)	10.4	(1.4-19.5)
25-34			93.1	(90-96.3)	3.6	(1.3-5.9)
35-44			95.9	(94.1-97.8)	5.3	(2.9-7.6)
45-54	20.1	(17.4-22.8)	97.1	(95.8-98.3)	5.2	(3.4-7.1)
55-64	17.0	(14.6-19.3)	95.8	(94.5-97.1)	3.9	(2.2-5.5)
65-74	14.8	(12.5-17.2)	95.9	(94.5-97.4)	1.0	(0.2-1.8)
75+	18.4	(15.8-21)	96.4	(95-97.7)	0.3	(0-1)
EDUCATION						
Less than H.S.	25.4	(19.4-31.3)	95.6	(92.9-98.3)	0.0	(0-0)
H.S. or G.E.D.	17.7	(15.6-19.9)	93.5	(91.5-95.5)	3.7	(2.2-5.3)
Some Post-H.S.	18.5	(15.9-21.1)	96.6	(95.4-97.8)	6.7	(3.2-10.3)
College Graduate	15.8	(13.5-18.1)	97.1	(95.7-98.5)	4.2	(2.7-5.7)
HOUSEHOLD INCOME						
Less than $15,000	25.1	(19.8-30.3)	92.9	(88.2-97.6)	8.3	(0-18.9)
$15,000- 24,999	23.0	(19-26.9)	94.5	(92.3-96.7)	8.4	(0-17)
$25,000- 34,999	18.1	(14.3-21.8)	95.9	(93.9-97.9)	6.4	(0-13.3)
$35,000- 49,999	21.3	(17.6-25)	94.8	(92.4-97.2)	4.3	(2-6.7)
$50,000- 74,999	13.8	(10.8-16.8)	96.6	(94.8-98.4)	3.5	(1.6-5.3)
$75,000+	14.0	(11.5-16.6)	96.8	(95.4-98.2)	4.5	(2.9-6.1)

Seatbelt Use

Seatbelts save lives. In addition to being the leading cause of death among U.S. residents aged 5-34 years, motor vehicle-occupant injuries account for approximately 15% of all nonfatal injuries treated in U.S. emergency departments. In 2005, the lifetime costs of fatal and nonfatal motor vehicle-occupant injuries were estimated at approximately $70 billion, including costs for medical care, treatment, rehabilitation, and lost productivity. Motor vehicles account for approximately 90% of all trips taken in the United States, and the vast majority of persons killed

and injured while traveling are occupants of motor vehicles. Seat belts, which reduce the risk for fatal injuries from motor vehicle crashes by approximately 45 percent and serious injuries by approximately 50 percent, are the most effective intervention for protecting motor vehicle-occupants.[5]

Failure to wear a seat belt contributes to more fatalities than any other single traffic safety-related behavior. 63% of people killed in accidents are not wearing seat belts. Unbelted occupants were five times more likely to die when involved in a crash than belted occupants. Wearing a seat belt is still the single most effective thing we can do to save lives and reduce injuries on America's roadways. The National Highway Traffic Safety Administration (NHTSA) estimates that approximately 270 lives are saved for every one percent increase in belt use. [8] Apart from this, seatbelt use would lead to a substantial saving in hospital costs and disability, particularly from head trauma.

Seatbelt Use Results

In 2010, when respondents were asked how often they wore a seatbelt when driving or riding in a car, 95.7 percent said always or nearly always. This figure is so near the maximum that it was difficult to see any differences between demographic groups. However, it appeared that wearing seatbelts was more common among females than males (98.1% vs. 93.1%). It also seemed to be less prevalent among racial and ethnic minorities and those with annual household incomes less than $15,000. There was really no other systematic difference among the demographic groups examined (see table 17.1).

Drinking and Driving

An automobile crash is considered to be alcohol-related when the driver is reported to have a blood alcohol level of .08 grams per deciliter or higher. Considering that blood alcohol level may not be reported for every crash and that any amount of alcohol causes some amount of impairment, figures for its impact are conservative.

About three in every ten American auto crash deaths will involve alcohol. On average someone is killed by a drunk driver every forty-eight minutes. In 2009, an estimated 10,839 people died in alcohol related driving crashes—a decline of 7.4 percent from the 11,711 drunk driving related fatalities of 2008.[9] About one-third of these deaths involved someone other than the driver.

Alcohol-related crashes in the United States cost the public an estimated $114.3 billion in 2000, including $51.1 billion in monetary costs and an estimated $63.2 billion in quality of life losses. People, other than the drinking driver, paid $71.6 billion of the alcohol-related crash bill, which is 63 percent of the total cost of these crashes.[7]

Drinking and Driving Results

In 2010, 4.7 percent of respondents reported that within the past 30 days they had driven when they had too much to drink at least once. More men than women had reported doing this (5.5% vs. 3.6%). A larger percentage of younger people also reported driving under the influence. The

range was 10.4 percent for those age 18 to 24 years to only 0.3% for those age 75 and older (see table 17.1).

Comparison with Other States

In all states and territories the range of people reporting at least one fall in the last month ranged from 11 percent to 24.6 percent with a median of 16.2 percent. At 17.9 percent, Iowa was worse than the median.

In terms of seatbelt use, the percent reporting their use always or nearly always ranged from 83.2 percent to 98.1 percent with a median of 94.2 percent. Iowa was better than the median here with 95.7 percent.

Drinking and driving at least once in the past month was reported from only 1.8 percent to 9.8 percent in all states and territories. Territories made up the highest three regions, so the highest state had a prevalence of 6.3 percent. The median was 3.5 percent. With 4.7 percent, Iowa was well above the median. There were only eight states with a higher prevalence of people admitting to driving under the influence of alcohol. However, the prevalence of drinking and driving has fallen in both Iowa and the nation since the last measurement in 2008.

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18. IMMUNIZATION

Background

Influenza is a potentially life-threatening, contagious disease that is caused by a family of viruses. When influenza attacks the lungs, the lining of the respiratory tract is damaged. The tissues temporarily become swollen and inflamed, but usually heal within two or more weeks.[1]

Influenza and pneumonia combined are the eighth leading cause of death among all Americans and the seventh leading cause for people over age 65. Influenza and pneumonia together resulted in more than 52,600 deaths in 2007 in the U.S.[6] and 633 in Iowa in 2009.[5]

Influenza can vary greatly from year to year in the severity of its impact. For instance, the usual seasonal influenza primarily was a problem for the elderly, while the recent H1N1 pandemic focused more on younger people. For healthy children and adults, influenza is typically a moderately severe illness. For unhealthy or elderly people, influenza can be very dangerous. Adults 65 years old and older who contract influenza are much more likely to have serious complications from this illness, which can affect their health and independence.

Influenza can be prevented with the influenza vaccine. This vaccine is produced each year so that it can be effective against influenza viruses that are expected to cause illness that year. A yearly influenza vaccination has been reported to be between 67% and 92% effective in preventing influenza and reducing its severity. The vaccine may be taken by a shot or by nasal spray. The nasal spray is not recommended for people at high risk, however. The best time to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.[4]

The Recommendation for annual vaccination against seasonal influenza includes almost everyone in the United States population from six months old and older. In the 2009-2010 flu season, the vaccination for H1N1 influenza was separate and in addition to the seasonal flu vaccination. H1N1 vaccination was monitored by the BRFSS, but will not be discussed here.

Influenza is a very serious illness for anyone at high risk. Certain diseases that place people at high risk include:

- Chronic lung disease such as asthma, emphysema, chronic bronchitis, tuberculosis, or cystic fibrosis,
- Heart disease,
- Chronic kidney disease,
- Diabetes or other chronic metabolic disorder,
- Severe anemia, or
- Diseases or treatments that depress immunity.

Some of the symptoms associated with influenza are fever, chills, coughing, weakness, loss of appetite, bodily aches and pains, sore throat, or dry cough.

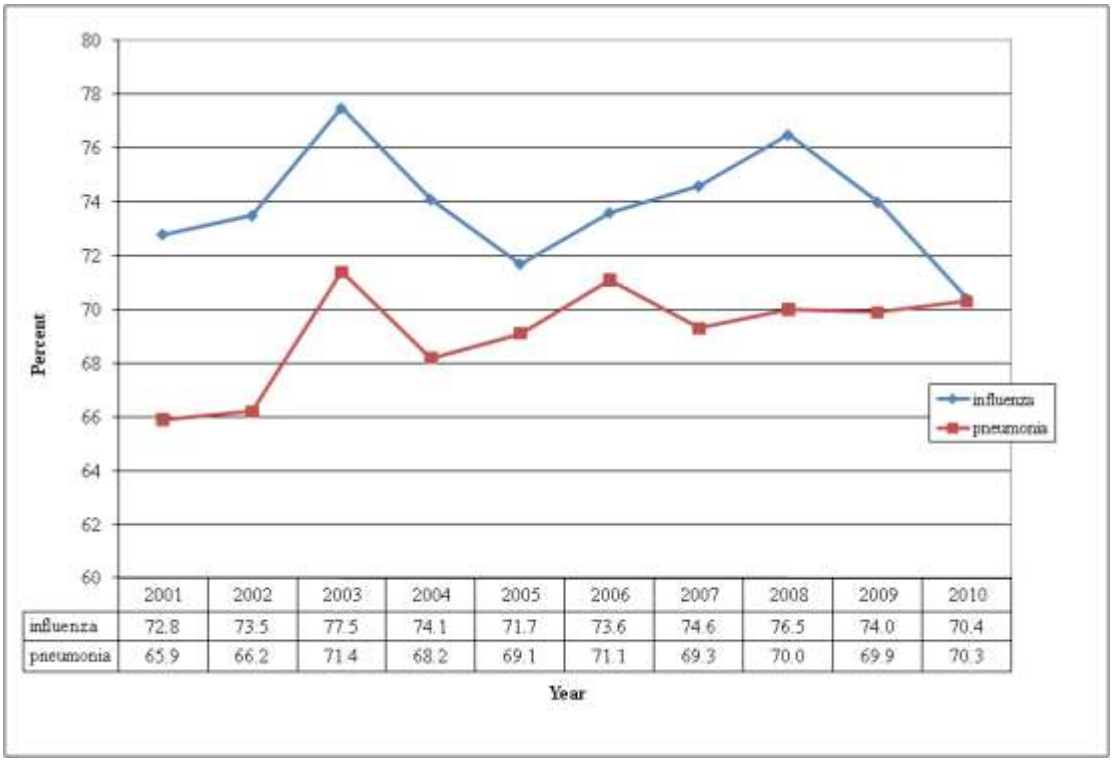
Pneumonia is a lung disease usually caused by bacteria, viruses, and other infectious agents such as fungi. The most common cause of pneumonia is bacterium.[2] Pneumonia is frequently a complication of influenza and is responsible for the vast majority of deaths from the two. In 2006, 1.2 million people in the U.S. were hospitalized with pneumonia and 55,477 people died from the disease.[2]

The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years old or older receive at least one lifetime dose of pneumococcal vaccine.[3] People at higher risk should receive the pneumonia vaccine at age 19 and higher. Such people would be smokers or people with asthma, emphysema, or COPD.

Immunization Results

In 2010, 70.4 percent of Iowans age 65 and over reported having a flu shot in the past 12 months. This is lower than the 74 percent found in 2009. This continues a downward trend that has been seen for the past two years and is the lowest figure seen in this survey in the past decade (see figure 18.1).

Figure 18.1: Immunizations in Iowans Age 65 and Over, 2001 – 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
influenza	72.8	73.5	77.5	74.1	71.7	73.6	74.6	76.5	74.0	70.4
pneumonia	65.9	66.2	71.4	68.2	69.1	71.1	69.3	70.0	69.9	70.3

Among all adults, 48.5 percent had a flu immunization in the past 12 months. This was either in the form of a flu shot or a FluMist™ nasal spray. Females, older people, people with more education, and Whites non-Hispanics were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (35.2%), while the highest was for those age 75 and older (71.8%) (see table 18.1).

In 2010, 70.3 percent of Iowans age 65 and over reported ever having a pneumonia vaccination. This is about the same as the 69.9 percent found in 2009 (see figure 18.1).

Among all adults, 27.8 percent had ever received a pneumonia vaccination. Older people, females, people with lower education, and people with lower income, were more likely to have pneumonia vaccinations. Non-White or Hispanics were less likely to have a pneumonia vaccination. Age made the greatest difference in whether someone had a pneumonia vaccination. The lowest percentage of pneumonia vaccination occurred among those who were 25 to 34 years old (12%), while those 75 years old and older were highest by far (75.9%) (see Table 18.1). Pneumonia vaccination did not really increase with increasing age until age 55. Since they are only recommended for those age 65 years and older except under special conditions, this is not surprising.

Table 18.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2010

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	48.5	(46.7-50.3)	27.8	(26.2-29.4)
SEX				
Male	43.3	(40.5-46.1)	25.3	(22.9-27.7)
Female	53.4	(51.1-55.7)	30.1	(28.1-32.1)
RACE/ETHNICITY				
White/Non-Hispanic	49.4	(47.6-51.3)	27.8	(26.3-29.3)
Non-White or Hisp.	36.8	(29.3-44.3)	25.9	(17.5-34.2)
AGE GROUP				
18-24	35.2	(26.6-43.7)	18.1	(10.3-25.9)
25-34	43.2	(38-48.3)	12.0	(8.3-15.7)
35-44	42.3	(38.4-46.2)	12.6	(9.9-15.3)
45-54	42.6	(39.4-45.8)	14.1	(11.7-16.5)
55-64	51.4	(48.4-54.4)	27.4	(24.7-30.1)
65-74	68.3	(65.1-71.4)	64.7	(61.4-68)
75+	71.8	(68.8-74.8)	75.9	(73-78.9)
EDUCATION				
Less than H.S.	40.1	(32.6-47.5)	27.1	(21.8-32.4)
H.S. or G.E.D.	45.6	(42.5-48.7)	33.4	(30.5-36.3)
Some Post-H.S.	44.9	(41.3-48.4)	26.8	(23.9-29.7)
College Graduate	56.5	(53.6-59.4)	22.9	(20.5-25.3)
HOUSEHOLD INCOME				
Less than $15,000	43.1	(35.3-50.8)	37.5	(29.9-45.1)
$15,000- 24,999	43.7	(39-48.5)	36.8	(32.3-41.3)
$25,000- 34,999	50.3	(44.7-56)	35.8	(30.7-40.9)
$35,000- 49,999	45.1	(40.9-49.3)	28.1	(24.6-31.6)
$50,000- 74,999	48.9	(44.7-53.1)	23.3	(19.8-26.8)
$75,000+	53.5	(50.2-56.9)	17.4	(15-19.8)

A new recommendation was distributed in 2010 to have all children older than six months to have an influenza immunization. Questions were asked about influenza vaccination in children for a randomly chosen child in the household. A child between the ages of six months and 18 years was reported to have had a flu shot in the past year for 50.5 percent of respondents. This was more likely the younger the child (66.2% for ages less than five years vs. 28.7% for those 15 to 17 years old).

Those who had ever been told they had diabetes or asthma were more likely to receive their flu and pneumonia vaccinations than those who had not been told they had these conditions. Of all respondents ever told they had diabetes, 67.2 percent had a flu vaccination and 65.4 percent had a pneumonia vaccination.

Of all those ever told they had asthma, 54.6 percent had their flu vaccination, while 40.7 percent had a pneumonia vaccination.

Comparison with Other States

The median percentage of the population age 65 and over who have had a flu shot in the past 12 months from all the states and territories was 67.3 percent in 2010. The range was from 26.9 percent to 73.4 percent. The lowest three values were from territories and were extreme. The lowest state prevalence was 59.3 percent. Iowa's value of 70.4 percent put it well above the median for people 65 years and over having a flu shot in the past year. The immunization rate for flu for people age 65 and over declined in both Iowa and the nation. It seems that while the overall rate of immunization was up, this was primarily attributable to increases among the young. A substantial decline was evident in the older population. A speculation about why this happened is that the emphasis in the H1N1 vaccination program was on the young, which may have sensitized them while diverting resources and attention from the elderly.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 68.5 percent. The range was from 24.8 percent to 74 percent. However, the three territories again were extremely low. After removing the three territories, the lowest state was 61.9 percent. Iowa's value of 70.3 percent is above the median.

Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010*, *Healthy People 2010* and *Healthy People 2020* goals for having a flu shot in the past 12 months and ever having a pneumonia vaccination for people age 65 and over are all 90%. Although much higher than the nation as a whole, Iowa's 2010 figures of 70.4 percent for having a flu shot and 70.3 percent for ever having a pneumonia vaccination have a long way to go to meet these targets. The *Healthy People 2020* goal for people age 18 to 65 is 80 percent. Iowa misses this by an even greater amount having an immunization prevalence of only 43.2 percent.

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19. HIV/AIDS

Background

HIV stands for human immunodeficiency virus. This is the virus that causes AIDS. HIV is different from most other viruses because it attacks the immune system. The immune system gives our bodies the ability to fight infections. HIV finds and destroys a type of white blood cell that the immune system must have to fight disease. *AIDS* stands for acquired immunodeficiency syndrome. AIDS is the final stage of HIV infection. It can take years for a person infected with HIV, even without treatment, to reach this stage. Having AIDS means that the virus has weakened the immune system to the point at which the body has a difficult time fighting infections.[2]

The HIV epidemic has now been with us for thirty years.[3] The most recent estimates suggest that 33.3 million persons were living with HIV infection worldwide at the end of 2009. In the United States, CDC estimates that 1,178,350 persons were living with HIV at the end of 2008, with 594,496 having died from AIDS. Over one fifth of these people do not know that they are infected: not knowing puts them and others at risk.

From 2005 through 2008, the estimated numbers of annual diagnoses of HIV infection in the 37 states with confidential name-based HIV infection reporting increased 8%. However, the estimated rates of annual diagnoses of HIV infection during this period remained stable. In 2008, the estimated rate of diagnoses of HIV infection in the 37 states was 19.4 per 100,000 population.[1]

Groups with the largest exposure include "men who have sex with men", injection drug users, African Americans, and Hispanics. Many of the new diagnoses are occurring among women and people infected heterosexually. These data must be used to ensure targeted prevention efforts to reach those in greatest need, with a primary focus on young African American and Hispanic men and women at risk through sexual and drug-related behaviors.

African Americans, Hispanics, and foreign-born blacks continue to be over-represented among persons with HIV diagnoses when compared to the sizes of their populations in Iowa. However, it is important to keep in mind that non-Hispanic whites account for over 70% of HIV diagnoses and persons living with HIV/AIDS.[5]

HIV/AIDS prevalence continues to increase in Iowa. There were 1,748 persons living with HIV/AIDS in Iowa on December 31, 2009, up from 1,616 a year earlier.[5]

In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown considerably. Modern HIV treatment offers 24 extra years of life – at $2,100 per month.[6] The cost of drugs is nearly three-fourths of the lifetime expense. The cost of treatment started at a late stage averages $4,700 per month. That's because hospital costs rise to almost half the lifetime expense. Estimated future costs will be $12.1 billion per year. Drugs will make up 70 percent of the cost.[6]

About 55 percent of adults aged 18-64 have never been tested for HIV. Even among people at higher risk for HIV infection, 28 percent have never been tested. CDC recommends routine HIV testing in health care settings. People need to get tested so they can get treated and not infect others. Being tested will save their lives and the lives of other people.[4]

HIV/AIDS Results

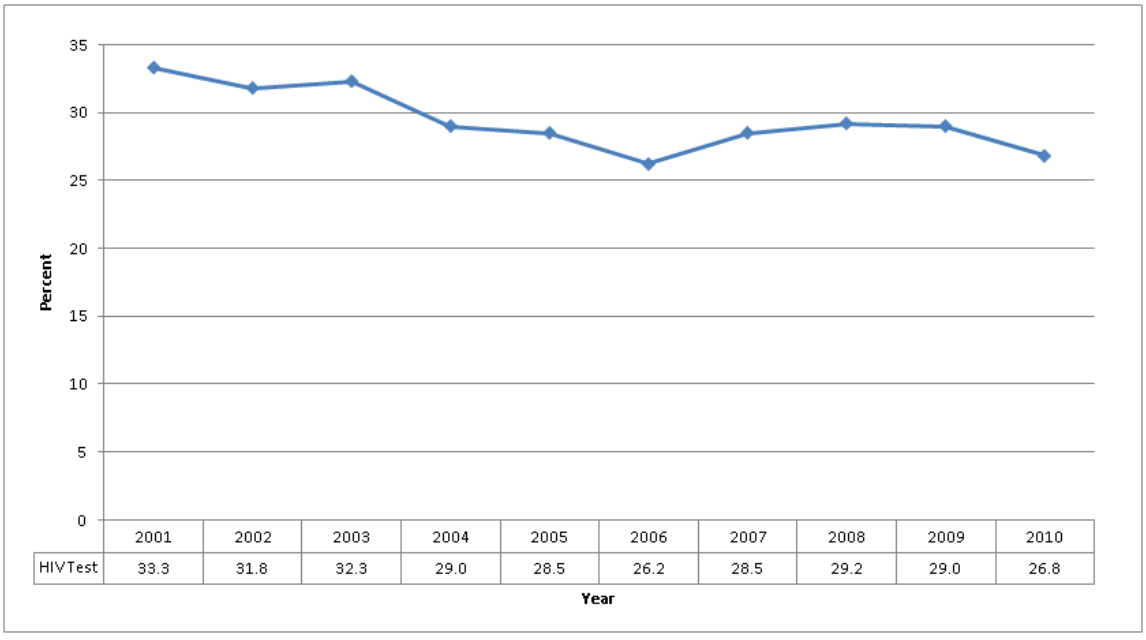
HIV/AIDS questions were only asked of people between the ages of 18 and 64 years.

In 2010 26.8 percent of respondents reported ever being tested for HIV, not including as part of a blood donation. This is down from the 2009 finding of 29 percent (see figure 19.1).

Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, people with a higher education, and people of lower household income were more likely to be tested. The largest proportion of respondents tested was among those age 25 to 34 years (39.7%). The proportions tested among 35 to 44 year olds and those with annual household incomes less than $15,000 were almost as large. The smallest proportion reporting ever being tested was 14 percent of those between ages 55 to 64 years old (see table 19.1).

There is an interesting interaction between sex and age, however. Figure 19.2 shows that in the younger age groups, many more women have been tested, while there is little difference in the older age groups.

Figure 19.1: Percentage of Iowans Reporting Ever Being Tested for HIV 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HIVTest	33.3	31.8	32.3	29.0	28.5	26.2	28.5	29.2	29.0	26.8

Each of the respondents who had received an HIV test was asked to describe where the test occurred. Respondents gave a variety of answers. The most commonly reported places were

Table 19.1: Percentage of Iowans Tested for HIV/AIDS, 2010

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	26.8	(24.8-28.8)
SEX		
Male	21.9	(19.2-24.6)
Female	31.9	(29.2-34.6)
RACE/ETHNICITY		
Non-Hispanic White	25.6	(23.6-27.5)
Non-White or Hisp.	38.8	(29.9-47.6)
AGE		
18-24	19.1	(12.2-26)
25-34	39.7	(34.6-44.8)
35-44	39.4	(35.5-43.3)
45-54	20.0	(17.5-22.5)
55-64	14.0	(11.8-16.2)
EDUCATION		
Less than H.S.	23.7	(15.7-31.7)
H.S. or G.E.D.	23.3	(19.6-27)
Some Post-H.S.	27.6	(23.9-31.3)
College Graduate	29.6	(26.7-32.5)
HOUSEHOLD INCOME		
<$15,000	28.5	(19.9-37.1)
$15,000- 24,999	39.5	(32.1-46.9)
$25,000- 34,999	24.1	(17.6-30.6)
$35,000- 49,999	26.9	(22.2-31.6)
$50,000- 74,999	25.8	(21.9-29.7)
$75,000+	26.2	(23.1-29.3)

hospital or clinic (47.2%), and private doctor or HMO office (36.6%). These together made up the vast majority of locations receiving an HIV test from last year.

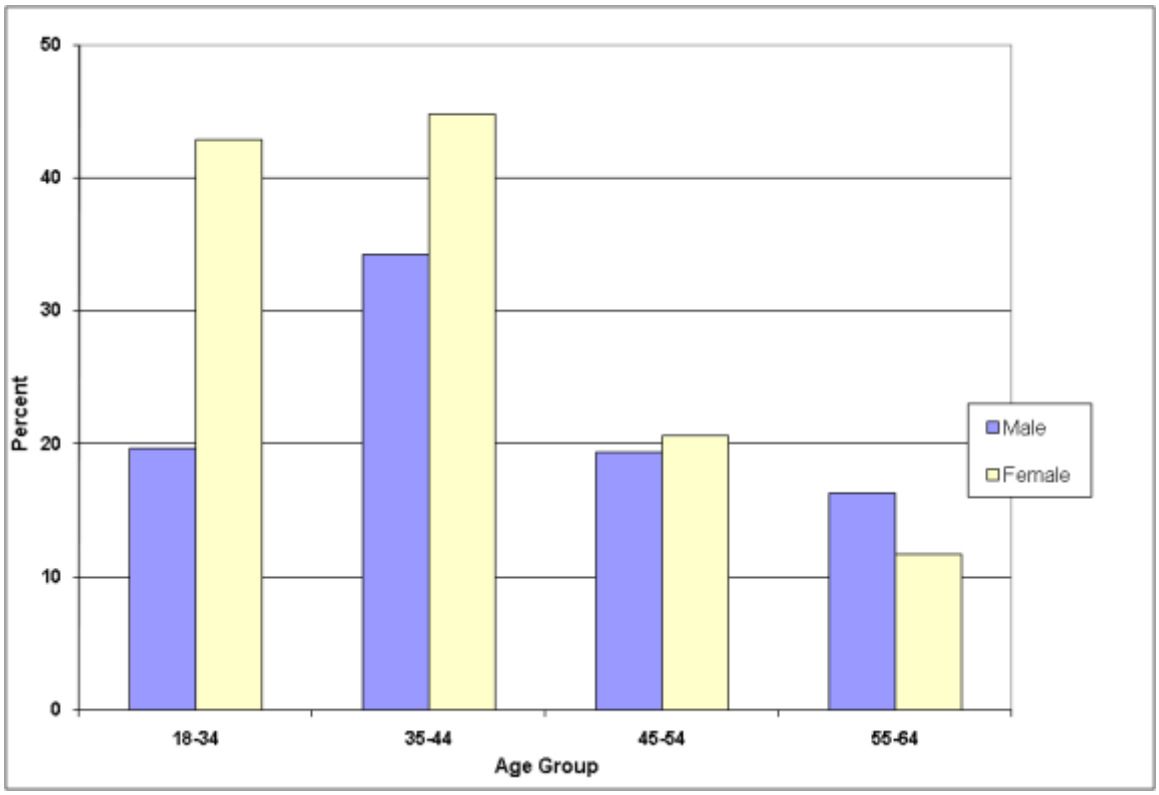
A new development in the HIV testing area is rapid testing. This gives the test taker the opportunity to know the results of their test without a lengthy interval in between the test and the results. During this interval many test takers can be lost to the process and not receive their results. When those people who had been tested for HIV within the past twelve months were asked if they had a rapid test, 26.3 percent said it was.

Finally, respondents to the HIV section were read a set of high risk sexual and drug use practices and asked if any of them applied to them. They did not have to say which ones. A total of 2.3 percent said that at least one of these statements applied to them. This would put them at very high risk of contracting HIV.

Comparison with Other States

The percentage of people age 18 through 64 who had a test for HIV ranged from 23.4 percent to 67.6 percent. The median percentage of people tested was 37.2 percent. There were only three states with a lower percentage being tested than Iowa at 26.7 percent. Four out of five of the lowest tested states were in the upper Midwest. Both Iowa and the nation experienced a decrease in the percentage of people being tested.

Figure 19.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2010



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20. ORAL HEALTH

Background

Good overall health requires good oral health. Oral health complications not only reflect general health conditions, but also exacerbate them. Oral diseases are linked to poor pregnancy outcomes, cardiovascular disease, diabetes, and respiratory disease. Poor oral health results in chronic and acute pain, loss of days from work and school, and inappropriate use of emergency rooms. Untreated oral diseases and conditions can impact the ability to eat and drink, swallow, maintain proper nutrition, smile, and communicate.[1]

During the last 50 years, there have been dramatic improvements in oral health, and most middle-aged and younger Americans expect to retain their natural teeth over their lifetimes. However, profound disparities remain that affect those without the resources to achieve good oral care or the knowledge of its importance. This fact inspired the first Surgeon General's Report on Oral Health, which identified a "silent epidemic" of dental and oral diseases and called for a national effort to improve Americans' oral health.[2]

Many studies document that those in poverty, racial minorities, and those in rural areas have less access to dental care. For example, poor children are more likely to have unmet dental need than children from families with higher incomes. Non-Hispanic black and Hispanic children and adults are less likely to have seen a dentist in the past 6 months than non-Hispanic whites. The most common barriers to good oral health are a lack of dental insurance or the inability to pay for care and problems of access involving transportation and travel, as well as the need to take time off work for appointments.[2]

Increasing access to preventive care is an important way to improve oral health for all populations, but in particular for the vulnerable and underserved. Many oral diseases can be prevented through a combination of behavior changes (e.g. home care and hygiene, proper food choices, tobacco cessation) and system changes (e.g. community water fluoridation, oral health promotion and awareness, increasing accessibility to care, increasing the dental safety net).

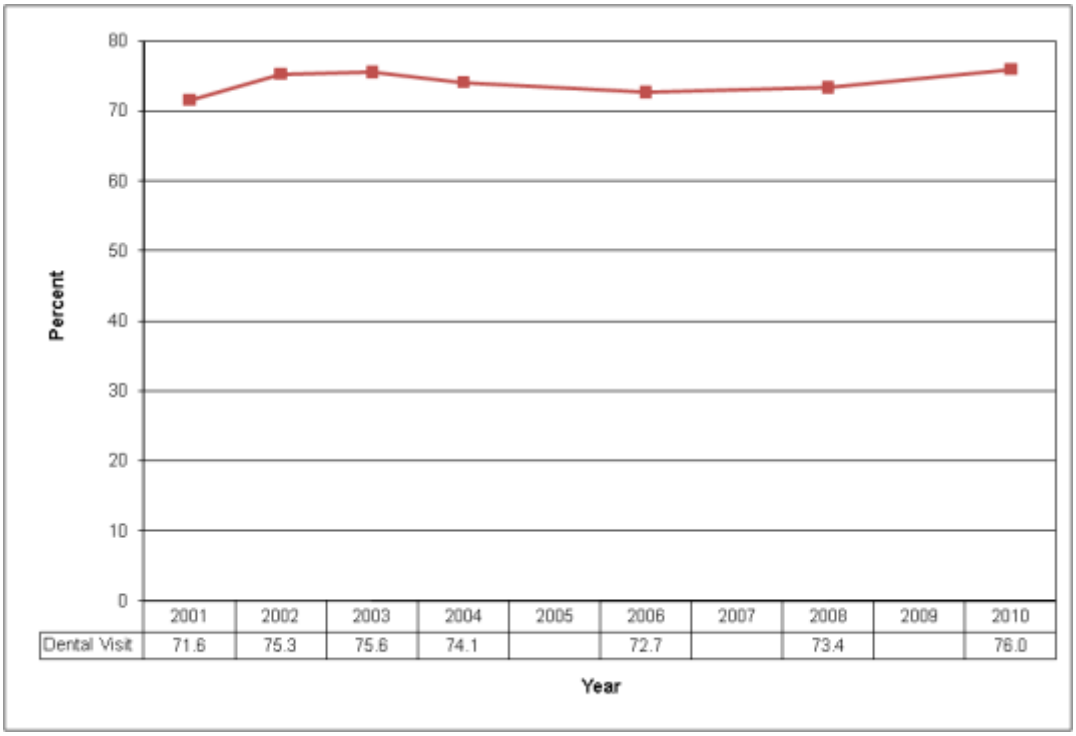
Oral Health Results

In 2010, 76 percent of Iowans surveyed reported visiting a dentist, dental hygienist or dental clinic within the past year. The percentage having annual dental visits is an increase from the 73.4 percent found in 2008 (see figure 20.1).

Females were more likely than males to report a dental visit during the past 12 months. Both higher education and greater income were related to the likelihood of having a dental visit. White non-Hispanics were more likely to have a dental visit than other race and ethnic groups. People in middle age were more likely to have a dental visit than either the younger or the older respondents. Iowans with a household income of $75,000 or more had the highest proportion reporting recent dental visits (88%). At the other extreme, 51.1 percent of those with less than a high school education reported visiting a dentist in the past 12 months (see table 20.1).

A majority of adult respondents (62.2%) had no permanent teeth removed due to tooth decay or gum disease. On the other hand, 4.2 percent had all their permanent teeth removed. The percentage of those with all permanent teeth removed rose with increasing age, lower income, and lower education. It was highest for those 65 years old and older (16.9%).

Figure 20.1: Percentage of Iowans Having Annual Dental Visits by Year, 2001-2010



Health Objectives for Iowa and the Nation

A goal in *Healthy Iowans 2010* is that 75% of Iowans 65 years old or older have an annual dental visit. In 2010, this was not met, with 72.6 percent of respondents 65 and over reporting an annual visit.

A *Healthy People 2010* goal is for 42% of Americans age 35 to 44 years old not to have had any permanent teeth extracted due to caries or periodontal disease. Iowa far exceeds this goal with 72.2 percent having no extractions. *Healthy People 2020* had a goal of 41.2 percent of Americans age 45 to 64 years having no teeth extracted. Iowa also far surpassed this goal with 55.8 percent having no extractions in this age group.

A goal of both *Healthy Iowans 2010* and *Healthy People 2010* is to have no more than 20% of people age 65 and over with all their permanent teeth extracted. Iowa achieved this goal having only 16.9 percent of this population with all permanent teeth extracted. In *Healthy People 2020* the goal was 21.6 percent of people age 65 to 74 years having no permanent teeth extracted. Iowa also surpassed this goal having only 14.8 percent with all permanent teeth extracted.

Table 20.1:
Percentage of Iowans Having Dental Visits within the Past 12 Months, 2010

DEMOGRAPHIC GROUPS	Last Dental Visit Within 12 Months	
	%	C.I. (95%)
TOTAL	76.0	(74.4-77.6)
SEX		
Male	71.8	(69.1-74.5)
Female	80.0	(78.2-81.8)
RACE/ETHNICITY		
White/Non-Hisp.	77.2	(75.6-78.7)
Non-White or Hisp.	60.8	(52.2-69.4)
AGE		
18-24	73.9	(65.8-82)
25-34	71.5	(66.6-76.4)
35-44	79.8	(76.5-83.2)
45-54	79.0	(76.3-81.7)
55-64	79.0	(76.4-81.5)
65-74	72.2	(69.3-75.2)
75+	72.9	(70-75.8)
EDUCATION		
Less than H.S.	51.1	(43.5-58.7)
H.S. or G.E.D.	69.9	(67-72.8)
Some Post-H.S.	76.6	(73.7-79.5)
College Graduate	86.9	(84.7-89.1)
HOUSEHOLD INCOME		
Less than $15,000	52.1	(43.9-60.3)
$15,000- 24,999	63.2	(58.5-67.9)
$25,000- 34,999	68.2	(63.1-73.3)
$35,000- 49,999	75.6	(71.7-79.5)
$50,000- 74,999	83.8	(80.5-87.1)
$75,000+	88.0	(85.6-90.4)

References

1. Institute of Medicine (IOM) and National Research Council (NRC). 2011. *Improving access to oral health care for vulnerable and underserved populations.* Washington, DC: The National Academies Press.
2. U. S. General Accounting Office. *Oral Health: Dental Disease Is a Chronic Problem Among Low-Income Populations and Vulnerable Populations*. Washington, DC. 2000.

21. VISUAL IMPAIRMENT AND ACCESS TO EYE CARE

Background

The sense of vision is generally relied upon most for information about the environment around us. Visual impairment is a serious public health concern among older adults.[1] Visual impairment is one of the four most significant contributors to the loss of independence among older Americans. Loss of vision can pose difficulties in managing household tasks, and getting to places outside the home. It can interfere with work and leisure activities.

Visual impairment can involve a large range of ability. Someone can be totally unable to see anything or they may have light perception. To be legally blind someone must have a visual acuity of 20/200 or less in the better eye after correction or a visual angle of less than 20 degrees in diameter. Someone may be considered visually impaired if they have a corrected acuity of 20/40 or less in the best eye. Some visual impairment may only apply at particular distances such as near-sightedness or far-sightedness.[4]

The United States spends more than $50 billion a year on vision problems. There are estimated to be over one million blind people over 40 years old and 3.6 million visually impaired people according to the definitions above—and the prevalence and the costs to care for these conditions are rising fast.[4] As the population ages, the number of people at risk for age-related eye diseases increase. The number of Americans with age-related eye disease and resulting vision impairment is projected to double within the next three decades.[2]

The leading causes of vision impairment among adults in the United States are:

- Cataracts,
- Glaucoma,
- Age-related Macular degeneration and
- Diabetic retinopathy.[3]

A cataract is a clouding of the eye's lens. Glaucoma is a progressive eye disease where pressure within the eye damages the optic nerve. It has no symptoms in the early stages and occurs so slowly that the sufferer may not notice the deterioration until it is quite advanced. Age-related macular degeneration affects the part of the eye that allows a sharp image of objects directly focused upon. Diabetic retinopathy is a deterioration of the blood vessels of the retina of the eye as a complication of diabetes.

Early intervention and regular eye exams are crucial in maintaining good vision. Between 40% and 50% of all blindness is preventable. For those already visually impaired, corrective action can often be taken either through treatment or rehabilitation.

Visual Impairment and Access to Eye Care Results

The BRFSS survey asked respondents 40 years old and older nine questions about their vision and eye care.

Most respondents reported no difficulty seeing. No difficulty identifying a friend from across the street was reported by 86.1 percent. A lower percentage of 68.8 percent reported no difficulty reading print such as the newspaper.

Around 56.1 percent of Iowans reported having their eyes examined by an eye doctor or professional within the past year. On the other hand, 1.5 percent said they had never had their eyes examined. When asked the main reason for not having an eye examination in the past year, most (66.4%) reported no reason to go, i.e. no symptom or problem.

When asked how long it had been since they had a dilated eye exam, 55.8 percent of respondents reported it was within one year. This question was asked in a different module for diabetics. For people with diabetes in the same 40 years and over age range, 76.6 percent had a dilated eye exam in the past year, while 52.9 percent of those not having diabetes had such an exam.

Table 21.1: Prevalence of Conditions Affecting Vision in Iowa, 2010

DEMOGRAPHIC GROUPS	Have Cataracts		Have Glaucoma		Have Macular Degeneration	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	14.7	(13.7-15.7)	4.1	(3.5-4.7)	4.3	(3.7-4.9)
SEX						
Male	11.5	(10.1-12.9)	3.2	(2.4-4)	3.3	(2.5-4.1)
Female	17.7	(16.3-19.1)	5.0	(4.2-5.8)	5.1	(4.3-5.9)
RACE/ETHNICITY						
White/Non-Hisp.	15.1	(14.1-16.1)	4.1	(3.5-4.7)	4.2	(3.6-4.8)
Non-White or Hisp.	7.0	(3.6-10.3)	3.6	(1-6.1)	4.8	(1-8.6)
AGE						
40-49	1.5	(0.7-2.4)	0.7	(0.2-1.2)	1.3	(0.5-2)
50-64	10.7	(9.2-12.2)	2.1	(1.4-2.7)	2.1	(1.3-2.9)
65-74	32.8	(29.7-35.9)	6.9	(5.3-8.6)	5.1	(3.6-6.6)
75+	31.4	(28.2-34.6)	13.0	(10.7-15.2)	14.5	(12.1-16.8)
EDUCATION						
Less Than H.S.	18.6	(13.9-23.3)	7.2	(4.3-10.1)	10.6	(7.1-14.1)
H.S. or G.E.D.	16.0	(14.2-17.8)	5.3	(4.3-6.3)	4.4	(3.4-5.4)
Some Post-H.S.	14.9	(12.9-16.9)	3.6	(2.6-4.6)	3.8	(2.8-4.8)
College Graduate	12.4	(10.6-14.2)	2.6	(1.8-3.4)	3.2	(2.2-4.2)
HOUSEHOLD INCOME						
Less than $15,000	21.9	(17.2-26.6)	7.8	(5.1-10.5)	8.3	(5.4-11.2)
$15,000- 24,999	18.6	(15.5-21.7)	8.5	(6.3-10.7)	7.8	(5.4-10.2)
$25,000- 34,999	19.3	(15.8-22.8)	6.1	(3.9-8.3)	4.7	(2.9-6.5)
$35,000- 49,999	16.1	(13.4-18.8)	3.4	(2-4.8)	5.4	(3.4-7.4)
$50,000- 74,999	12.8	(10.4-15.2)	2.7	(1.5-3.9)	3.2	(1.8-4.6)
$75,000+	7.7	(6.1-9.3)	1.2	(0.6-1.8)	1.2	(0.6-1.8)

A little more than half of respondents, 51.9 percent, reported having health insurance that covered vision care. Household income had the most effect on having this insurance.

Households earning $75,000 or more had the highest percent of people with insurance covering vision (65.9%), while those earning $15,000 to $25,000 had the lowest (36.9%).

Three common conditions affecting vision are cataracts, glaucoma, and age-related macular degeneration. When asked if they had cataracts, 14.7 percent of respondents said they did. Another 4.4 percent said they had them but had them removed. Glaucoma was reported by 4.1 percent of respondents. Age-related macular degeneration was reported by 4.3 percent of respondents.

Table 21.1 shows that prevalence of these conditions varies with the demographics of the respondent. In all cases the condition was more prevalent in women than men, as age increased, as education decreased, and as income decreased. Cataracts alone of the three were more common among White non-Hispanics than Hispanic or other race respondents.

For information on diabetic retinopathy, see the diabetes chapter.

Health Objectives for Iowa and the Nation

Healthy People 2020 has the goal to increase the proportion of adults who had a comprehensive dilated eye examination, within the past 2 years to 60.5 percent. Iowa surpassed this goal with 84.5 percent having a dilated eye exam in the past two years.

References

1. Centers for Disease Control and Prevention. The State of Vision, Aging, and Public Health in America, 2011.
2. Murphy, J. The High Cost of Poor Vision. Review of Optometry, 2008.
3. The Eye Diseases Prevalence Research Group. Visual Impairment and Access to Eye Care. Archives of Ophthalmology, Vol. 122, No. 4; April, 2004. 477-485.
4. Prevent Blindness America. Vision Problems in the U.S: Prevalence of Adult Vision Impairment and Age-Related Eye Disease in America, update to the 4th edition. 2008.

22. FAMILY PLANNING

Background

Most women want to have children. And they want to have children when they are ready and best able to care for them. But millions of women face unplanned pregnancies every year. In fact, half of all pregnancies in the United States are unplanned. [3]

Unintended pregnancy affects men and women as well as the health of the infant. Unintended pregnancies, defined as pregnancies for which at the time of conception a woman either wanted to be pregnant later (mistimed) or did not want to be pregnant at any time (unwanted), are common among all population subgroups. However, the risk is higher for certain populations, such as teenagers, women 40 years of age and older, women with lower levels of education, women who are not married, and women with low income.

Unintended pregnancy resulting in a live birth is associated with delayed entry into prenatal care. This may be due to women with unintended pregnancies being less likely to realize they are pregnant in the first trimester than women with intended pregnancies. Other adverse behaviors associated with unintended pregnancy include poor maternal nutrition, cigarette smoking, and use of alcohol and other drugs. Unintended pregnancy may also be associated with adverse birth outcomes. Women with mistimed or unwanted pregnancies were more likely to give birth to infants who were premature, low birth weight, or small for gestational age than women with intended pregnancies.[2]

The consequences of an unintended pregnancy do not end at birth, as evidenced by the associations between unintended births and breast-feeding initiation and duration and between unintended births and child abuse and neglect. Children under two years that were mistimed or unwanted were found to score lower on several psychometric measures, indicating reduced cognitive, behavioral, and emotional development.

Use of contraception can reduce unintended pregnancies and births. Lack of use or improper use of contraception can result in unintended pregnancies and births, but also can result in breaks in career plans and educational plans and can affect healthy relationships.

A woman's partner can be an important determinant in her intent to become pregnant and/or to continue a pregnancy, contraceptive method choice, intention to change methods, and the regularity of use of a method.

Women who were non-users of contraception accounted for more than 50% of all unintended pregnancies. If they were to use contraception, the overall rate of unintended pregnancy could be cut in half.

Family Planning Results

Family planning questions are only asked of people of child-bearing age. They are not asked if the respondent is female and 45 years of age or older, is pregnant, or had a hysterectomy, or is male 60 years or older.

In 2010, 60.2 percent of the respondents who were sexually active used some method to prevent pregnancy. Use of a preventive method was more likely to be reported for women than men (68.9% vs. 55.2%).

Many reasons were given for not using some method of birth control. The leading ones were: pregnancy was wanted (18.2%); don't think you or your partner are able to get pregnant (14.3%); had some form of sterilization, either vasectomy or hysterectomy, (27.1%); or too old to get pregnant (12.1%). Women were much more likely to give pregnancy was wanted as a reason (31.2%).

When respondents were asked how they felt about having a child now or sometime in the future, the majority (63.7%) said they did not want to have one. The remainder was about equally divided in the amount of time in the future they might want to have a child from less than one to more than five years. Although a majority of both sexes responded that they did not want to have a child, more men answered that they did not want to have one (68.6% vs. 56%).

When the female respondents were asked how they felt about becoming pregnant in their last pregnancy, the majority (52.3%) said they wanted to be pregnant then. The second largest group (23.5%) had not been pregnant before, so they couldn't think back on it. The remainder was about equally divided between wanting to be pregnant sooner, later, or not at all.

References

1. Centers for Disease Control and Prevention. Unintended Pregnancy Prevention: Contraception, 2011. Available at http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/Contraception.htm.
2. The National Campaign, Consequences of Unplanned Pregnancy, Washington, D.C. **Available at http://www.thenationalcampaign.org/resources/pdf/FactSheet-Consequences.pdf.**
3. Planned Parenthood. Pregnancy Options, 2011. Available at http://www.plannedparenthood.org/health-topics/pregnancy/pregnant-now-what-4253.htm.

APPENDIX 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2010

STATE: Iowa

Healthy People 2010[2] **Objective**[3]	**Yr 2010 Target**	**State, 2010**
Health Insurance (Objective #1.1) Ages ≥18	100%	89.6%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages ≥18	96%	79.2%
Pap Smear, Ever Had (Objective #3.11a) Women, Ages ≥18	97%	92.8%
Pap Smear, Within Past Three Years (Objective #3.11b) Women, Ages ≥18	90%	80.6%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #3.12a) Ages ≥50	50%	17.4%
Sigmoidoscopy, Ever Had (Objective #3.12b) Ages ≥50	50%	64.2%
Mammogram, Within Past Two Years (Objective #3.14) Women, Ages ≥40	70%	76.0%
Influenza Immunization, Within Past Year (Objective #14.29a) Ages ≥65	90%	70.4%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages ≥65	90%	70.3%
Obese, BMI ≥ 30 (Objective #19.2) Ages ≥20	15%	29.1%
(No) Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #21.3) Ages 35-44	42%	72.2%

Healthy People 2010[2] Objective[3]	Yr 2010 Target	State, 2010
Extraction of All Natural Teeth (Objective # 21.4) Ages ≥65	20%	16.9%
No Leisure Time Physical Activity (Objective # 22.1) Ages ≥18	20%	24.8%
Binge Drinking, During the Past Month (Objective #26.11c) Ages ≥18	6%	16.9%
Cigarette Smoking (Objective #27.1a) Ages ≥18	12%	16.1%

[1] Behavioral Risk Factor Surveillance System

[2] Public Health Service. *Healthy People 2010*: National Health Promotion and Disease Prevention Objectives--full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 2000.

[3] In some cases, BRFSS definitions of objectives differ slightly from those in *Healthy People 2010*. See *Healthy People 2010* for the exact definition of the objective.

Year 2020 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2010

STATE: Iowa

Healthy People 2020[2] **Objective**[3]	**Yr 2020 Target**	**State, 2010**
Health Insurance (Objective #AHS-1.1) Ages ≥18	100%	87.4%
Specific Source of Ongoing Primary Care (Objective #AHS-5.3) Ages ≥18 & <65	89.4%	77.0%
Specific Source of Ongoing Primary Care (Objective #AHS-5.4) Age ≥65	100%	88.2%
Pap Smear, Within Past Three Years (Objective #C-15) Women, Ages ≥18	93%	80.6%
Colorectal cancer screening according to latest guidelines (Objective #C-16) Ages ≥50	70.5%	61.7%
Mammogram, Within Past Two Years (Objective #C-17) Women, Ages ≥40	81.1%	76.0%
Increase the proportion of adults with diabetes who have an annual dilated eye examination (Objective #D-10)	58.7%	76.7%
Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year (Objective #D-11)	71.1%	77.4%
Increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily(Objective #D-13)	70.4%	64.5%
Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education (Objective #D-14)	62.5%	61.8%
Influenza Immunization, Within Past Year (Objective # IID-12.5) Ages 18 - 64	80%	43.2%
Influenza Immunization, Within Past Year (Objective # IID-12.7) Ages ≥65	90%	70.4%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective # IID-13.1) Ages ≥65	90%	70.3%
Increase the proportion of adults who are at a healthy weight (Objective #NWS-8) Age ≥20	33.9%*	32.8%
Obese, BMI ≥ 30 (Objective NWS-9) Ages ≥20	30.6%*	29.7%
Any Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #OH-4.1) Ages 45-64	68.8%	44.2%

Healthy People 2020[2] **Objective**[3]	**Yr 2020 Target**	**State, 2010**
Extraction of All Natural Teeth (Objective # OH-4.2) Ages 65-74	21.6%	14.6%
No Leisure Time Physical Activity (Objective # PA-1) Ages ≥18	32.6%	24.8%
Binge Drinking, During the Past Month (Objective #SA-14.3) Ages ≥18	24.3%	16.9%
Cigarette Smoking (Objective #TU-1.1) Ages ≥18	12%*	16.1%
Smokeless Tobacco Use (Objective #TU-1.2) Ages ≥18	0.3%*	4.4%
Increase smoking cessation attempts by adult smoker (Objective #TU-4.1) Ages ≥18	80%*	52.6%
Increase recent smoking cessation success by adult smokers 6 Mo. To 1 Yr. (Objective #TU-4.1) Ages ≥18	8%*	9.4%
Increase the proportion of adults who have a comprehensive eye examination, including dilation, within the past 2 years (Objective # V-4)	60.5%	84.5%

[1] Behavioral Risk Factor Surveillance System

[2] Public Health Service. *Healthy People 2010*: National Health Promotion and Disease Prevention Objectives--full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 2000.

[3] In some cases, BRFSS definitions of objectives differ slightly from those in *Healthy People 2010*. See *Healthy People 2010* for the exact definition of the objective.

*Age adjusted

Year 2010 Health Objectives for Iowa:
State Summary of BRFSS[1] Data for 2010

Healthy Iowans 2010[2] **Objective**[3]	**Yr 2010 Target**	**Iowa, 2010**
Health Insurance (Objective #1-1) Ages 18 – 64	100%	87.4%
Mammogram, Within Past Two Years (Objective #2-5.1) Women, Ages ≥ 40	85%	76.0%
Pap Test, Within Past Three Years (Objective #2-6.1) Women, Ages ≥ 18	90%	80.6%
Fecal Occult Blood Test (FOBT) Within Past Two Years **(Objective #2-7.1)** Ages ≥ 50	55%	17.4%
Sigmoidoscopy/Colonoscopy, Ever Had (Objective #2-7.1) Ages ≥50	64%	64.2%
Diabetes Prevalence (Objective #3-1)	7.7%	7.5%
People with diabetes receiving annual dilated eye exams (Objective #3.3.2)	80%	76.7%
People with diabetes receiving at least annual foot exams (Objective #3.3.2)	75%	80%
People with diabetes that have a glycosylated hemoglobin measurement at least once a year Objective #3.3.2)	95%	90.8%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	70.4%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages >= 65	90%	70.3%
Prevent a further rise in the percent of Iowans who are overweight (Objective 13.3)	38.3%	37.1%
Prevent a further rise in the percent of Iowans who are obese (Objective 13.3)	22.9%	29.1%
Adults with asthma having asthma-related emergency or urgent care visits (Objective 18-1) Ages >= 18	12.6%	4.2%
Extraction of All Natural Teeth (Objective #15.3) Ages ≥ 65	20%	16.9%
Had a dental visit within the past year (Objective #15-7) Ages ≥ 65	75%	72.6%
Exposure to secondhand Smoke at Work (Objective 21-4)	10%	Met due to ban
Not allowing smoking anywhere in the home (Objective 21.6)	69%	79.2%
Cigarette Smoking (Objective 21.7) Ages > 18	18%	16.1%

Healthy Iowans 2010[2] **Objective**[3]	**Yr 2010 Target**	**Iowa, 2010**
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	15.2%
Cigarette Smoking (Objective 21.7) Household Income < $25,000	25%	28.3%
Cigarette smokers who stopped smoking cigarettes for a day or more (Objective #21-7)	75%	52.6%

[1]Behavioral Risk Factor Surveillance System

[2]Iowa Department of Public Health. *Healthy Iowans 2010* Mid-Course Revision, 2005.

[3]In some cases, BRFSS definitions of objectives differ slightly from those in *Healthy Iowans 2010*. See *Healthy Iowans 2010* for the exact definition of the objective.

APPENDIX 2

Iowa 2010 Behavioral Risk Factor Surveillance System Questionnaire

Section 1: Health Status

1.1: Would you say that in general your health is:

1 Excellent
2 Very good
3 Good
4 Fair or
5 Poor

Section 2: Healthy Days - Health-related Quality of Life

2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

__ __ Number of days
8 8 None

2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

__ __ Number of days
8 8 None **If Q2.1 also "None", go to next module**

If Q2.1 and Q2.2=88 (None), go to next section.

2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

__ __ Number of days
8 8 None

Section 3: Health Care Access

3.1: Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

1 Yes
2 No

3.2: Do you have one person you think of as your personal doctor or health care provider?

If "No," ask: "Is there more than one, or is there no person who you think of as your personal doctor or health care provider?"

1 Yes, only one
2 More than one
3 No

3.3: Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

1 Yes
2 No

3.4: About how long has it been since you last visited a doctor for a routine checkup? *A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.*

1 Within past yr (any time less than 12 months ago)
2 Within past 2 yrs (one year but less than 2 years ago)
3 Within past 5 yrs (two years but less than 5 years ago)
4 5 or more years ago
8 Never

Section 4: Sleep

The next question is about getting enough rest or sleep.

4.1: During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?

_ _ Number of days
8 8 None

Section 5: Exercise

5.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

1 Yes
2 No

Section 6: Diabetes

6.1: Have you ever been told by a doctor that you have diabetes?

(If "Yes" and respondent is female, ask: "Was this only when you were pregnant?")

(If Respondent says pre-diabetes or borderline diabetes, use response code 4.)

1 Yes
2 Yes, but female told only during pregnancy
3 No
4 No, pre-diabetes or borderline diabetes

Module 1: Pre-Diabetes

NOTE: Only asked of those not responding "Yes" (code=1) to Core Q6.1 (Diabetes awareness question).

1. Have you had a test for high blood sugar or diabetes within the past three years?

1 Yes
2 No

CATI note: If Core Q6.1 = 4 (No, pre-diabetes or borderline diabetes); answer Q2 "Yes" (code = 1).

2. Have you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?

1. Yes
2. No

Module 2: Diabetes

To be asked following core Q6.1 if response is "yes"

1. How old were you when you were told you have diabetes?

__ __Code age in years **[97 = 97 and older]**

2. Are you now taking insulin?

1 Yes
2 No

3. About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __ Times per year
8 8 8 Never

4. About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.

1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year
8 8 8 Never
5 5 5 No feet

5. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?
__ __Number of times **[76 = 76 or more]**
8 8 None

6. A test for "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?
__ __Number of times **[76 = 76 or more]**
8 8 None
9 8 Never heard of "A one C" test

CATI note: If Q4 = 555 (No feet), go to Q8.
7. About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?
__ __ Number of times **[76 = 76 or more]**
8 8 None

8. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (any time less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
8 Never

9. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?
1 Yes
2 No

10. Have you ever taken a course or class in how to manage your diabetes yourself?
1 Yes
2 No

Section 7: Oral Health
7.1: How long has it been since you last visited a dentist or a dental clinic? Include visits to dental specialists, such as orthodontists**.**
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8 Never

7.2: How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.
NOTE: If wisdom teeth are removed because of tooth decay or gum disease, they should be included in the count for lost teeth.
1 1 to 5
1 6 or more but not all
2 All
8 None

CATI note: If Q7.1 = 8 (Never) or Q7.2= 3 (All), go to next section
7.3: How long has it been since you had your teeth "cleaned" by a dentist or dental hygienist?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8. Never

Section 8: Cardiovascular Disease Prevalence
Now I would like to ask you some questions about cardiovascular disease.

Has a doctor, nurse, or other health professional EVER told you that you had any of the following?
For each, tell me **"Yes"**, **"No"**, or you're **"Not sure"**:
8.1: (Ever told) you had a heart attack, also called a myocardial infarction?
1 Yes
2 No

8.2: (Ever told) you had angina or coronary heart disease?
1 Yes
2 No

8.3: (Ever told) you had a stroke?
1 Yes
2 No

Section 9: Asthma
9.1: Have you ever been told by a doctor, nurse or other health professional that you had asthma?
1 Yes
2 No ⇨ **Go to next section**

9.2: Do you still have asthma?
1 Yes
2 No

Section 10: Disability
The following questions are about health problems or impairments you may have.
10.1: Are you limited in any way in any activities because of physical, mental, or emotional problems?
1 Yes
2 No

10.2: Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
Include occasional use or use in certain circumstances
1 Yes
2 No

Section 11: Tobacco Use
11.1: Have you smoked at least 100 cigarettes in your entire life?
5 packs = 100 cigarettes
1 Yes
2 No ⇨ ⇨ **Go to next section**

11.2: Do you now smoke cigarettes every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all ⇨ **Go to next section**

11.3: During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?
1 Yes
2 No

CATI note: If Q11.2 = 3 (Not at all); continue.
Otherwise, go to Q11.5.

11.4: How long has it been since you last smoked cigarettes regularly?
0 1 Within the past month (less than 1 month ago)
0 2 Within the past 3 months (1 month but less than 3 months ago)
0 3 Within the past 6 months (3 months but less than 6 months ago)
0 4 Within the past year (6 months but less than 1 year ago)
0 5 Within the past 5 years (1 year but less than 5 years ago)
0 6 Within the past 10 years (5 years but less than 10 years ago)
0 7 10 years or more
0 8 Never smoked regularly

11.5: Do you currently use chewing tobacco or snuff, or snus every day, some days, or not at all?
NOTE: Snus (Swedish for snuff) is a moist smokeless tobacco, usually sold in small pouches that are placed under the lip against the gum. Snus (rhymes with 'goose')
1 Every day
2 Some days
3 Not at all

Section 12: Demographics
12.1: What is your age?
__ __ Code age in years

12.2: Are you Hispanic or Latino?
1 Yes
2 No

12.3: Which one or more of the following would you say is your race?
Mark all that apply
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native or
6 Other **[specify]**

CATI note: If more than one response to Q12.3, continue. Otherwise, go to Q12.5

12.4: Which one of these groups would you say best represents your race?
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other **[specify]**

12.5 Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit? Active duty does not include training for the Reserves or National Guard, but DOES include activation, for example, for the Persian Gulf War.
1 Yes, now on active duty
2 Yes, on active duty during the last 12 months, but not now
3 Yes, on active duty in the past, but not during the last 12 months
4 No, training for Reserves or National Guard only
5 No, never served in the military

12.6: Are you:
1 Married
2 Divorced
3 Widowed
4 Separated
5 Never married or
6 A member of an unmarried couple

12.7: How many children less than 18 years of age live in your household?
__ __ Number of children
8 8 None

12.8: What is the highest grade or year of school you completed?
1 Never attended school or only attended kindergarten
2 Grades 1 through 8 (Elementary)
3 Grades 9 through 11 (Some high school)
4 Grade 12 or GED (High school graduate)
5 College 1 year to 3 years (Some college or technical school)
6 College 4 years or more (College graduate)

12.9: Are you currently:
1 Employed for wages
2 Self-employed
3 Out of work for more than 1 year
4 Out of work for less than 1 year
5 A Homemaker
6 A Student
7 Retired or
8 Unable to work

12.10: Is your annual household income from all sources:
01 Less than $10,000
02 $10,000 to less than $15,000
03 $15,000 to less than $20,000
04 $20,000 to less than $25,000
05 $25,000 to less than $35,000
06 $35,000 to less than $50,000
07 $50,000 to less than $75,000
08 $75,000 or more

12.11: About how much do you weigh without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions up
__ __ __ Weight pounds/kilograms

CATI note: If Q12.11 = 7777 (Don't know/Not sure) or 9999 (Refused), skip Q12.13 and Q12.14).
12.12: About how tall are you without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions down
__/__ __ Height ft/inches/meters/centimeters

12.13: What county do you live in?
__ __ _ County name

12.14: What is your ZIP Code where you live?
_ _ _ _ _ ZIP Code

12.15: Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.
1 Yes
2 No ⇨ **Go to Q12.17**

12.16: How many of these are residential numbers?
__ Residential telephone numbers **[6=6 or more]**

12.17: During the past 12 months, has your household been without telephone service for 1 week or more?
Note: Do not include interruptions of phone service due to weather or natural disasters.
1 Yes
2 No

Cell Phone Questions.
12.18a: Do you have a cell phone for personal use? Please include cell phones used for both business and personal use.
1 Yes ⇨ **Go to Q12.18c**
2 No

12.18b: Do you share a cell phone for personal use (at least one-third of the time) with other adults?
1 Yes ⇨ **Go to Q12.18d**
2 No ⇨ **Go to Q12.19**

12.18c: Do you usually share this cell phone (at least one-third of the time) with any other adults?
1 Yes
2 No

12.18d: Thinking about all the phone calls that you receive, what percent, between 0 and 100, are received on your cell phone?
_ _ _ Enter Percent (1 to 100)
8 8 8 Zero

12.19: Indicate sex of respondent. **Ask only if necessary**.
1 Male ⇨ **Go to next section.**
2 Female **If respondent 45 years old or older, go to next section**

12.20: To your knowledge, are you now pregnant?
1 Yes
2 No

Section 13: Alcohol Consumption

13.1: During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?
1 Yes
2 No ⇨ **Go to next section**

13.2: During the past 30 days, how many days per week or per month did you have at least 1 drink of any alcoholic beverage?
1 __ __ Days per week
2 __ __ Days in past 30
8 8 8 No drinks in past 30 days ⇨ **Go to next section**

13.3: One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?
NOTE: A 40 ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks
__ __Number of drinks

13.4: Considering all types of alcoholic beverages, how many times during the past 30 days did you have **X [X = 5 for men, X = 4 for women]** or more drinks on one occasion?
__ __Number of times
8 8 None

13.5: During the past 30 days, what is the largest number of drinks you had on any occasion?
_ _ Number

Section 14: Immunization

14.1: A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot?
1 Yes
2 No ⇨ **Go To 14.3**

14.2: During what month and year did you receive your most recent flu shot?
_ _ / _ _ _ _ Month / Year

14.3: The flu vaccine that is sprayed in the nose is also called FluMist™. During the past 12 months, have you had a flu vaccine that was sprayed in your nose?
1 Yes
2 No ⇨ **Go To 14.5**

14.4: During what month and year did you receive your most recent flu vaccine that was sprayed in your nose?
_ _ / _ _ _ _ Month / Year

14.5: A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?
1 Yes
2 No

Section 15: *Falls*
If respondent is 45 years or older continue, otherwise go to next section.
The next questions ask about recent falls. By a fall, we mean when a person unintentionally comes to rest on the ground or another lower level.
15.1**:** In the past 3 months, how many times have you fallen?
_ _ Number of times **[76 = 76 or more]**
8 8 None ⇨ **Go to next section**

15.2: [Fill in "Did this fall (from Q15.1) cause an injury?"]. If only one fall from Q15.1 and response is "Yes" (caused an injury); code 01. If response is "No", code 88.
How many of these falls caused an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.
_ _ Number of falls **[76 = 76 or more]**
8 8 None

Section 16: Seatbelt Use

16.1: How often do you use seat belts when you drive or ride in a car? Would you say …
1 Always
2 Nearly always
3 Sometimes
4 Seldom
5 Never
8 Never drive or ride in a car

Section 17: Drinking and driving
CATI note: If Q16.1 = 8 (Never drive or ride in a car), or If Q13.1 = 2 (No); go to Section 18, otherwise continue.
The next question is about drinking and driving.
17.1: During the past 30 days, how many times have you driven when you've had perhaps too much to drink?
_ _ Number of times
8 8 None

Section 18: Women's Health
CATI Note: If respondent is male, go to the next section.
The next questions are about breast and cervical cancer.
18.1: A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?
1 Yes
2 No ⇨ **Go to Q18.3**

18.2: How long has it been since you had your last mammogram?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less 5 years ago)
5 5 or more years ago

18.3: A clinical breast exam is when a doctor, nurse or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?
1 Yes
2 No ⇨ **Go to Q18.5**

18.4: How long has it been since your last breast exam?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

18.5: A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?
1Yes
2 No ⇨ **Go to Q18.7**

18.6: How long has it been since you had your last Pap test?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

CATI NOTE: If response to core Q12.20 = 1 (is pregnant) then go to next section.

18.7: Have you had a hysterectomy?
A hysterectomy is an operation to remove the uterus (womb)
1 Yes
2 No

Section 19: Prostate Cancer Screening
CATI Note: If respondent is ≤39 years of age, or is female, go to next section.
Now, I will ask you some questions about prostate cancer screening.

19.1: A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?
1 Yes
2 No ⇨ **Go to Q19.3**

19.2: How long has it been since you had your last PSA test?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years)
3 Within the past 3 years (2 years but less than 3 years)
4 Within the past 5 years (3 years but less than 5 years)
5 5 or more years ago

19.3: A digital rectal exam is an exam in which a doctor, nurse, or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?
1 Yes
2 No ⇨ **Go to Q19.5**

19.4: How long has it been since your last digital rectal exam?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years)
3 Within the past 3 years (2 years but less than 3 years)
4 Within the past 5 years (3 years but less than 5 years)
5 5 or more years ago

19.5: Have you ever been told by a doctor, nurse, or other health professional that you had prostate cancer?
1 Yes
2 No

Section 20: Colorectal Cancer Screening
CATI Note: If respondent is ≤ 49 years of age, go to next section
20.1: A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?
1 Yes
2 No ⇨ **Go to Q20.3**

20.2: How long has it been since you had your last blood stool test using a home kit?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago

20.3: Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?
1 Yes
2 No ⇨ **Go to next section**

20.4: For a SIGMOIDOSCOPY, a flexible tube is inserted into the rectum to look for problems. A COLONOSCOPY is similar, but uses a longer tube, and you are usually given medication through a needle in your arm to make you sleepy and told to have someone else drive you home after the test. Was your MOST RECENT exam a sigmoidoscopy or a colonoscopy?
1 Sigmoidoscopy
2 Colonoscopy

20.5: How long has it been since you had your last sigmoidoscopy or colonoscopy?
1 Within the past year (any time less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 Within the past 10 years (5 years but less than10 years ago)
5 10 or more years ago

Section 21: HIV/AIDS
CATI Note: If respondent is 65 years old or older, go to next section
The next few questions are about the national health problem of **HIV,** the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer **every** question if you don't want to. Although we will ask you about testing, we will not ask you about the results of any test you may have had.

21.1: Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation.
Include tests using fluid from your mouth.
1 Yes
2 No ⇨ **Go to Q21.5**

21.2: Not including blood donations, in what month and year was your last HIV test?
Note: If response is before January 1985, code "Don't know".
CATI INSTRUCTION: If the respondent remembers the year but cannot remember the month, code the first two digits 77 and the last four digits for the year.
__ __/__ __ __ __ Code month and year

21.3: Where did you have your last HIV test–at a private doctor or HMO office, at a counseling and testing site, at a hospital, at a clinic, in a jail or prison, in a drug treatment facility**,** at home, or somewhere else?
01 Private doctor or HMO office
02 Counseling and testing site
03 Hospital
04 Clinic
05 In a jail or prison (or other correctional facility)
06 Drug treatment facility
07 At Home
08 Somewhere else

CATI Note: Ask Q21.4 only if Q21.2 is within the last 12 months. Otherwise, go to Q21.5.
21.4: Was it a rapid test where you could get your results within a couple of hours
1 Yes
2 No

21.5: I'm going to read you a list. When I'm done, please tell me if any of the situations apply to you. You do not need to tell me which one**.**

- You have used intravenous drugs in the past year.
- You have been treated for a sexually transmitted or venereal disease in the past year.
- You have given or received money or drugs in exchange for sex in the past year.
- You had anal sex without a condom in the past year.

Do any of these situations apply to you?
1 Yes
2 No

Section 22: Emotional Support & Life Satisfaction

The next two questions are about emotional support and your satisfaction with life.

22.1: How often do you get the social and emotional support you need?
INTERVIEWER NOTE: If asked, say "please include support from <u>any</u> source".
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never

22.2: In general, how satisfied are you with your life?
1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied

Module 4: Visual Impairment and Access to Eye Care
If respondent is less than 40 years of age, go to next module.

I would like to ask you questions about how much difficulty, if any, you have doing certain activities. If you usually wear glasses or contact lenses, please rate your ability to do them while wearing glasses or contact lenses.

1. How much difficulty, if any, do you have in recognizing a friend across the street? Would you say:
1 No difficulty
2 A little difficulty
3 Moderate difficulty
4 Extreme difficulty
5 Unable to do because of eyesight
6 Unable to do for other reasons
8 Not applicable (Blind) ⇨ **Go to next module**

2. How much difficulty, if any, do you have reading print in newspaper, magazine, recipe, menu, or numbers on the telephone? Would you say:
1 No difficulty
2 A little difficulty
3 Moderate difficulty
4 Extreme difficulty
5 Unable to do because of eyesight
6 Unable to do for other reasons
8 Not applicable (Blind) ⇨ **Go to next module**

3. When was the last time you had your eyes examined by any doctor or eye care provider?
1 Within the past month (any time less than 1 month ago) ⇨ **Go to Q5**
2 Within the past year (1 month but less than 12 months ago) ⇨ **Go to Q5**
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
5 Never
8 Not applicable (Blind) ⇨ **Go to next module**

4. What is the main reason you have not visited an eye care professional in the past 12 months?
0 1 Cost/insurance
0 2 Do not have/know an eye doctor
0 3 Can not get to the office/clinic (too far away, no transportation)
0 4 Could not get an appointment
0 5 No reason to go (no problem)
0 6 Have not thought of it
0 7 Other
0 8 Not Applicable (Blind) ⇨ **Go to next module**

Note: Skip Q5, if any response to Module 2 (Diabetes) Q8.

5. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (any time less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (more than 1 year but less than 2 years ago)
4 2 or more years ago
5 Never
8 Not applicable (Blind) ⇨ **Go to next module**

6. Do you have any kind of health insurance coverage for eye care?
1 Yes
2 No
8 Not applicable (Blind) ⇨ **Go to next module**

7. Have you been told by an eye doctor or other health care professional that you NOW have cataracts?
1 Yes
2 Yes, but had them removed
3 No
8 Not applicable (Blind) ⇨ **Go to next module**

8. Have you EVER been told by an eye doctor or other health care professional that you had glaucoma?
1 Yes
2 No
8 Not applicable (Blind) ⇨ **Go to next module**

Age-related Macular Degeneration (AMD) is a disease that blurs the sharp, central vision you need for "straight-ahead" activities such as reading, sewing, and driving. AMD affects the macula, the part of the eye that allows you to see fine detail
NOTE: Age-related Macular Degeneration (Age-related Mak·yuh·luh *r* Di·jen·uh·rey·shuh *n*)

9. Have you EVER been told by an eye doctor or other health care professional that you had Age-related macular degeneration
1 Yes
2 No
8 Not applicable (Blind) ⇨ **Go to next module**

Module 7 Revised: Family Planning

If respondent is female and 45 years of age or older, has had a hysterectomy, is pregnant, or male 60 years of age or older, go to next module.

The next set of questions asks you about your thoughts and experiences with family planning. Please remember that all of your answers will be kept confidential.

Some things people do to keep from getting pregnant include not having sex at certain times, withdrawal, using birth control methods such as the pill, implants, shots, condoms, diaphragm, foam, IUD, having their tubes tied, or having a vasectomy.

1. Are you or your [If female, insert "husband/partner," if male, insert "wife/partner"] doing anything now to keep [If female, insert "you," if male, insert "her"] from getting pregnant?
NOTE: If more than one partner, consider usual partner.
1 Yes ⇨ **Go to Q3**
2 No
3 No partner/not sexually active ⇨ **Go to next module**
4 Same sex partner ⇨ **Go to next module**

2. Some reasons for not doing anything now to keep **[If female, "you", if male, insert "her"]** from getting pregnant include wanting a pregnancy, not being able to pay for birth control, or not thinking that **[If female, insert "you", if male, insert "she"]** can get pregnant.
What is your main reason for not doing anything <u>now</u> to keep **[If female, "you", if male, insert "her"]** from getting pregnant?
0 1 Didn't think you were going to have sex/no regular partner
0 2 You want a pregnancy
0 3 You or your partner don't want to use birth control
0 4 You or your partner don't like birth control/fear side effects
0 5 You can't pay for birth control
0 6 Religious reasons
0 7 Lapse in use of a method
0 8 Don't think you or your partner can get pregnant
0 9 You or your partner had tubes tied (sterilization)

1 0 You or your partner had a vasectomy (sterilization) ⇨ **Go to next module**
1 1 You or your partner had a hysterectomy
1 2 You or your partner are too old
1 3 You or your partner are currently breast-feeding
1 4 You or your partner just had a baby/postpartum
1 5 Other reason
1 6 Don't care if you get pregnant
1 7 Partner is pregnant now
INTERVIEWER NOTE: If respondent reports "other reason," ask respondent to "please specify" and ensure that their response does not fit into another category. If response does fit into another category, please mark appropriately.

3. How do you feel about having a child now or sometime in the future? Would you say---
1 You don't want to have one
2 You do want to have one, less than 12 months from now
3 You do want to have one, between 12 months to less than 2 years from now
4 You do want to have one, between 2 years to less than 5 years from now
5 You do want to have one, 5 or more years from now

[If Male, go to next module]
4. Thinking back to your last pregnancy, just before you got pregnant, how did you feel about becoming pregnant? Would you say…
1 You wanted to be pregnant sooner
2 You wanted to be pregnant later
3 You wanted to be pregnant then
4 You didn't want to be pregnant then or at any time in the future
8 Never had a pregnancy

Module 14: Cancer Survivorship
Now I am going to ask you about cancer.
CATI note: If Core Q19.5 = 1 (Yes), answer Q1 "Yes" (code = 1), then go to Q2.
1. Have you EVER been told by a doctor, nurse, or other health professional that you had cancer?
Read only if necessary: By "other health professional" we mean a nurse practitioner, a physician's assistant, social worker, or some other licensed professional.
1 Yes
2 No ⇨ **Go to next module**

2. How many different types of cancer have you had?
1 Only one
2 Two
3Three or more

3. At what age were you told that you had cancer?
_ _ Code age in years **[97 = 97 and older]**
CATI note: If Q2 = 2 (Two) or 3 (Three or more), ask: "At what age were you first diagnosed with cancer?"
INTERVIEWER NOTE: This question refers to the first time they were told about their first cancer.

CATI note: If Core Q19.5 = 1 (Yes) and Q2 = 1 (Only one); auto fill Q4 (response code 18)
4. What type of cancer was it?
If Q2 = 2 (Two) or 3 (Three or more), ask: "With your most recent diagnoses of cancer, what type of cancer was it?"
INTERVIEWER NOTE: Please read list only if respondent needs prompting for cancer type (i.e., name of cancer) [1-28]:
Breast
0 1 Breast cancer
Female reproductive (Gynecologic)
0 2 Cervical cancer (cancer of the cervix)
0 3 Endometrial cancer (cancer of the uterus)
0 4 Ovarian cancer (cancer of the ovary)
Head/Neck
0 5 Head and neck cancer
0 6 Oral cancer
0 7 Pharyngeal (throat) cancer
0 8 Thyroid **[Go to next module]**
Gastrointestinal
0 9 Colon (intestine) cancer
1 0 Esophageal (esophagus)
1 1 Liver cancer
1 2 Pancreatic (pancreas) cancer
1 3 Rectal (rectum) cancer **[Go to next module]**
1 4 Stomach
Leukemia/Lymphoma (lymph nodes and bone marrow)
1 5 Hodgkin's Lymphoma (Hodgkin's disease)
1 6 Leukemia (blood) cancer
1 7 Non-Hodgkin's Lymphoma
Male reproductive
1 8 Prostate cancer
1 9 Testicular cancer
Skin
2 0 Melanoma
2 1 Other skin cancer
Thoracic
2 2 Heart
2 3 Lung
Urinary cancer:
2 4 Bladder cancer
2 5 Renal (kidney) cancer
Others
2 6 Bone
2 7 Brain
2 8 Neuroblastoma
2 9 Other

5. Are you currently receiving treatment for cancer? By treatment, we mean surgery, radiation therapy, chemotherapy, or chemotherapy pills.
1 Yes ⇨ **Go to next module**
2 No

6. What type of doctor provides the majority of your health care?
INTERVIEWER NOTE: If the respondent requests clarification of this question, say: "We want to know which type of doctor you see most often for illness or regular health care (Examples: annual exams and/or physicals, treatment of colds, etc.)."
0 1 Cancer Surgeon
0 2 Family Practitioner
0 3 General Surgeon
0 4 Gynecologic Oncologist
0 5 Internist
0 6 Plastic Surgeon, Reconstructive Surgeon
0 7 Medical Oncologist
0 8 Radiation Oncologist
0 9 Urologist
1 0 Other

7. Did any doctor, nurse, or other health professional EVER give you a written summary of all the cancer treatments that you received?
1 Yes
2 No

8. Have you EVER received instructions from a doctor, nurse, or other health professional about *where* you should return or *who* you should see for routine cancer check-ups after completing your treatment for cancer?
1 Yes
2 No ⇨ **Go to Q10**

9. Were these instructions written down or printed on paper for you?
1 Yes
2 No

10. With your most recent diagnosis of cancer, did you have health insurance that paid for all or part of your cancer treatment?
1 Yes
2 No
INTERVIEWER NOTE: "Health insurance" also includes Medicare, Medicaid, or other types of state health programs.

11. Were you EVER denied health insurance or life insurance coverage because of your cancer?
1 Yes
2 No

12. Did you participate in a clinical trial as part of your cancer treatment?
1 Yes
2 No

13. Do you currently have physical pain caused by your cancer or cancer treatment?
1 Yes
2 No ⇨ **Go to next module**

14. Is your pain currently under control?
1 Yes
2 No

State Added Nutrition & Physical Activity
1. How often do you drink a glass or can of soda such as coke or other sweetened drinks such as fruit punch or sports drinks? Do not count diet drinks.
Interviewer note: This also includes any drinks with added sugar, such as Sunny Delight, Tampico, Hawaiian Punch, sugar cane juice, cranberry cocktail, Hi-C, Snapple, Gatorade and energy drinks
1 _ _ times per day
2 _ _ times per week
3 _ _ times per month
4 _ _ times per year
5 5 5 Never

2. How often do you use low-fat or fat-free dairy products such as milk, yogurt, or cheese?
1. Less than 1/week
2. Once a week
3. 2-3 times a week
4. 4-6 times a week
5. Once a day

3. How often do you use whole-grain products such as whole-wheat bread or pasta, oatmeal, or bran cereal?
1. Less than 1/week
2. Once a week
3. 2-3 times a week
4. 4-6 times a week
5. Once a day

4. On a typical WEEKEND, how many hours do you usually spend watching television or videos? Do not count video or computer games.
1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

5. On a typical WEEKDAY, how many hours do you usually spend watching television or videos? Do not count video or computer games.
1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

State Added Food Insecurity
1. How many times in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals? Would you say you were worried or stressed …
1 Often, 6 or more months,
2 Sometimes, 1 to 5 months, or
3 Never?

State Added Colorectal Cancer Screening
[ASK IF AGE > 49]
1. Next, I would like to ask you some questions about colorectal cancer screening.
Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No ⇨ **Go to Next Module**

2. What test did your health care provider recommend?
1 Blood Stool Kit
2 Sigmoidoscopy or colonoscopy (exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems)
3 Other test
4 Recommended both Blood Stool Kit and sigmoidoscopy or Colonoscopy
5 Did not recommend a test ⇨ **Go to Next Module**

3. Did you have the test [if Q2 = 4, tests] your health care provider recommended?
1 Yes ⇨ **Go to Next Module**
2 No

4. What is the main reason you did not have the test?
11 No symptoms
12 No family history of colorectal cancer
13 Cost/Not covered by insurance
14 Too old to have test
15 Too young to have test
16 No time
17 Test is distasteful
18 Embarrassment
19 Fear of finding cancer
20 Don't want to do the prep
21 Don't know where to get the test
22 Don't know how to do the test
23 Other

State Added Colorectal Cancer Advertising
[ASKED IF AGE > 49]
1. In the past 6 months, have you seen any articles or advertising about colorectal cancer screening?
1 Yes
2 No ⇨ **Go to Next Module**

2. Where did you see this article or advertisement about colorectal cancer?
[IF MORE THAN ONE, SELECT MOST FREQUENTLY SEEN]
11 Magazine
12 Doctor's Office
13 Television
14 Radio
15 Health Newsletter
16 Billboards
17 Bus signs
18 Other

State Added Colorectal Cancer Knowledge
[ASK IF AGE > 49]

1. Next, I'm going to read you several statements about colorectal cancer. After I read each one, please tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree.
A person's age is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5Strongly disagree?

2. A person's race or ethnicity is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

3. A person's gender is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

4. Colorectal cancer in a blood relative is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

5. A person's use of tobacco is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

6. A person's diet is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

7. A person's weight is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?
8. A person's alcohol intake is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

State Added Colorectal Cancer Plans
[Ask MODULE ONLY if Age > 49]

1. I'd like to get a sense of your plans regarding colorectal cancer screening. Which of the following best describes your plan for gathering information? Would you say…

[Interviewer note: repeat "about colorectal cancer screening" when necessary]
1 You do not plan to get more information about colorectal cancer screening,
2 You will get more information at some point in the future,
3 You will get information within six months,
4 You will get information within the next month,
5 You have already received more information, or
6 You are already knowledgeable and do not need more information?

2. Which of the following best describes your plan for getting screened for colorectal cancer? Would you say…
1 You do not plan to get screened for colorectal cancer,
2 You plan on getting screened at some point in the future,
3 You plan on getting screened within the next six months,
4 You plan on getting screened within the next month,
5 You have made an appointment to get screened , or
6You have already been screened for colorectal cancer.
⇨ Go to Next Module

[IF SACCSQ3 = 1 OR 2, SKIP TO Next Module]
3. If you have not been screened for colorectal cancer, what has kept you from being screened?
11 No symptoms
12 No family history of colorectal or colon cancer
13 Cost/Not covered by insurance
14 Don't know where to get the exam
15 I am nervous about the procedure
16 OTHER Specify_____
88 I have been screened

State Added Colorectal Cancer Risk
[Ask MODULE ONLY if Age > 49]
1. In terms of your own risk, what would you say your chances are of developing colorectal cancer? Would you say ...
1 High,
2 Medium,
3 Low, or
4 None?

2. If a person is of average risk for colorectal cancer, at what age should the person be screened for the first time?
__ __ AGE [18-97]
9 7. 97 years old or older

State Added Respiratory
1. Have you ever been told by a doctor, nurse or other health professional that you have emphysema or chronic obstructive pulmonary disease, also known as COPD?
1 Yes
2 No

2. Have you ever been told by a doctor, nurse, or other health professional that you have chronic bronchitis?
1 Yes
2 No

State Added Smoking
If core question 11.1 is 'yes' continue, else skip to Next Module
1. Previously you said that you had smoked at least 100 cigarettes in your entire life. Over the past year have you been smoking fewer cigarettes, if any, but using more smokeless types of tobacco instead?
1 Yes
2 No **⇨ Go to Next Module**
3 No, haven't smoked cigarettes in the past year **⇨ Go to Next Module]**

2. Why did you make that change? Was it…
[SELECT ALL THAT APPLY]
1 the price of cigarettes,
2 the ban on smoking in public areas,
3 concern about your health,
4 personal preference, or
5 something else?

State Added Secondhand Smoke

1. Which statement best describes the rules about smoking inside your home?
1 Smoking is not allowed anywhere inside your home
2 Smoking is allowed in some places or at some times
3 Smoking is allowed anywhere inside the home or
4 There are no rules about smoking inside the home

CATI note: If response to Core Q12.9 = 1 (Employed) or 2 (Self-employed), continue. Otherwise, go to next Module.

2. In a typical week at work, how many hours would you say that you are in a room or car with smoke from someone else's cigarettes, cigars, or pipe?
____ ____ Number of hours per week
01 One hour or less
70 Seventy hours or more
88 None

STATE ADDED HEALTH INSURANCE

1. Have you heard of Iowa's Child Health Insurance Program, called Hawk-I?
1 Yes
2 No

Module 23: Random Child Selection
CATI note: If Core Q12.7 = 88, (no children under age 18 in the household, or refused), go to next module.
If Core Q12.7 = 1; INTERVIEWER: "Previously, you indicated there was one child age 17 or younger in your household. I would like to ask you some questions about that child." G**o to Q1**.
If Core Q12.7 is > 1 and Core Q12.7 does not equal to 88; INTERVIEWER: "Previously, you indicated there were [number] children age 17 or younger in your household. Think about those [number] children in order of their birth, from oldest to youngest. The oldest child is the first child and the youngest child is the last. Please include children with the same birth date, including twins, in the order of their birth."
CATI INSTRUCTION: RANDOMLY SELECT ONE OF THE CHILDREN. This is the "Xth" child. Please substitute "Xth" child's number in all questions below.
INTERVIEWER: "I have some additional questions about one specific child. The child I will be referring to is the "Xth" **[CATI: please fill in correct number]** child in your household. All following questions about children will be about the "Xth" **[CATI: please fill in correct number]** child."

1. What is the birth month and year of the "**Xth**" child?
_ _/_ _ _ _ Code month and year

2. Is the child a boy or a girl?
1 Boy
2 Girl

3. Is the child Hispanic or Latino?
1 Yes
2 No

4. Which one or more of the following would you say is the race of the child?
[Check all that apply]
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
7Other [specify] _____

If more than one response to Q4; continue. Otherwise, go to Q6.

5. Which one of these groups would you say best represents the child's race?
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other

6. How are you related to the child?
1 Parent (mother or father) include biologic, step or adoptive parent
2 Grandparent
3 Foster parent or guardian
4 Sibling (include biologic, step and adoptive sibling)
5 Other relative
6 Not related in any way

Module 25: Childhood Immunization
CATI note: If Core Q12.7 = 88, or 99 (No children under age 18 in the household, or Refused), go to next module.
CATI note: If selected child's age is ≥ 6 months, continue. Otherwise, go to next module.

1. Now I will ask you questions about seasonal flu. There are two types of seasonal flu vaccinations. One is a shot and the other is a spray in the nose. During the past 12 months, has **[Fill: he/she]** had a seasonal flu vaccination?
1 Yes
2 No **Go to next module**

2. The flu vaccination may have been either the flu shot or the flu spray. The flu spray is the flu vaccination that is sprayed in the nose. During what month and year did **[Fill: he/she]** receive **[Fill: his/her]** most recent seasonal flu vaccination?
_ _ / _ _ _ _ Month / Year

Module 24: Childhood Asthma Prevalence
CATI Note: If response to core Q12.7 is '88' (none or refused) go to next module.
The next two questions are about the "Xth" **[CATI: please fill in correct number]** child.

1. Has a doctor, nurse or other health professional EVER said that the child has asthma
1 Yes
2 No ⇨ **Go to next module**

2. Does the child still have asthma?
1 Yes
2 No

STATE ADDED GAMBLING

1. In the past 12 months have you bet money or possessions on any of the following activities? Casino gaming including slot machines and table games; lottery including scratch tickets, pull tabs and lotto; sports betting; internet gambling; bingo or any other type of wagering.
1 Yes
2 No

Asthma Follow-up Permission Script
CATI note: Go to Closing Statement if there is not an eligible respondent for the Asthma Follow-up

APPENDIX 3

Differences Due to Inclusion of Cell Phone Only Respondents and Raking Weighting Method

In 2010, 598 cell phone numbers were called to collect BRFSS interviews. Respondents using cell phones were only interviewed if they did not have a landline telephone. Otherwise, they had a chance of being in the landline sample. These respondents were only asked the core questions in the survey along with some procedural questions. Since many of the collection procedures for cell phones are still somewhat experimental, the data from cell phones were not used in the main body of this report. This special appendix will compare responses from the landline sample to the combined landline plus cell phone only sample. In the future the two groups are likely to be combined in reporting from the outset.

The weighting method for cell phone and landline combined data will use a raking procedure. This is more sophisticated and includes more factors than the weighting method that has been used for landline alone data. In addition to age, gender and race, the new weighting technique uses education level and marital status in weighting interview data. This procedure will be used for all data in future years. Differences observed may be due to both the inclusion of cell phone data and the different weighting method. Cell phone interviews cannot be weighted in the same way as landline phone data since a cell phone is not a household appliance as a landline phone generally is. This comparison will give an idea of the direction and difference in results to expect from including a cell phone only sample in survey responses.

Table 1: Comparison of Selected BRFSS Measures For Landline with Landline and Cell Phone Only Combined Interviews for Iowa BRFSS, 2010

Measure	Landline Only	Cell Phone and Landline	Difference
Health status fair or poor	11.5%	15.5%	-4.0%
Have no health care coverage age 18 – 64	12.6%	18.2%	-5.6%
Do you have one person you think of as your personal doctor or health care provider?	79.2%	74.8%	4.4%
Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?	7.8%	12.9%	-5.1%
Had checkup in past 5 years	91.7%	90.0%	1.7%
Exercise other than job in past 30 days	75.2%	70.8%	4.4%
Told by doctor you have diabetes	7.5%	9.0%	-1.5%
Ever told you had a heart attack	3.9%	4.6%	-0.7%
Ever told you had a stroke	2.8%	3.0%	-0.2%
Have you ever been told that you had asthma?	11.6%	13.1%	-1.5%
Do you currently have asthma?	7.8%	8.3%	0.5%
Do you have a disability	19.9%	22.3%	-2.4%
Current smoker	16.1%	21.3%	-4.2%
Stopped smoking a day or two to try to quit	52.6%	54.4%	-1.8%

Measure	Landline only	Cell Phone and landline	Difference
Overweight (BMI between 25 and 30)	37.1%	35.8%	1.3%
Obesity (BMI >= 30)	29.1%	30.0%	-0.9%
Binge drink	16.9%	20.3%	-3.4%
Heavy drinking	5.2%	7.1%	-1.9%
Drink and Drive	4.6%	6.1%	-1.5%
Had influenza vaccination in past 12 months – Age >= 65	70.4%	68.7%	1.7%
Ever had pneumonia vaccination – Age >= 65	70.4%	70.0%	0.4%
Fall in past month	17.9%	19.8%	-1.9%
Always or nearly always wear seatbelts	95.7%	94.7%	1.0%
Had Mammogram in past 3 years (Age >= 40)	76.0%	71.4%	4.6%
Had Pap Test in past 2 years	89.7%	78.6%	2.1%
Had Recommended Colorectal Cancer Screening (Age >= 50)	61.7%	60.3%	1.4%
Have you ever been tested for HIV?	26.8%	30.2%	-3.4%
Always or usually get the social and emotional support you need?	85.8%	81.6%	4.2%
Satisfied with life	96.4%	94.0%	2.4%

The results show quite a large difference on many measures when cell phone only households are included with the landline sample. Much of this difference is due to the different weighting methods, rather than the inclusion of cell phone only households. Only 605 cell phone interviews were conducted.

Differences in many demographic measures were seen between the cell phone only and landline interviews. Many of the risk measure differences can be attributed to these different demographics. Table 2 shows actual differences in the number of interviews for landline vs. cell phone only samples to give an idea for the influence of such demographic variables on the outcome.

Table 2: Demographic Differences between landline and cell phone only samples in the Iowa BRFSS, 2010

	Landline only		**Landline + Cell Phone only**		**Cell Phone only**	
Measure	**Number**	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Age 18 – 24	161	2.7%	289	4.3%	128	21.2%
Age 65+	2,204	36.4%	2,233	33.6%	29	4.8%
Hispanic	139	2.3%	164	2.5%	25	4.1%
Education level – High School Grad or better	5,685	93.4%	6,241	93.4%	556	91.9%
Employed	3,208	52.7%	3,622	54.2%	414	68.4%
Marital Status – Married	3,711	61.1%	3,973	59.6%	262	43.3%
Sex = Male	2,332	38.2%	2,631	39.3%	299	49.4%
Household Income < $25,000	1,318	25.5%	1,506	26.4%	188	31.1%